Florida WILDLIFE

FLY FISHING

PUT SIX
TAKE FIVE

SPINNING
ULTRA LIGHT

AUGUST, 1957

The Florida Magazine for all Sportsmen

25 CENTS

FLORIDA WILDLIFE'S

Fishing Citation

"for that BIG ONE that DIDN'T get away"

ELIGIBILITY REQUIREMENTS

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fly, spinning, or bait-casting tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

Application for a Florida Wildlife Fishing Citation must be made within 10 days of the date fish was caught. Application must be made on the prescribed form as shown on this page. (Requests for additional forms should be addressed to: Florida Wildlife, Game & Fresh Water Fish Commission, Tallahassee, Florida.)

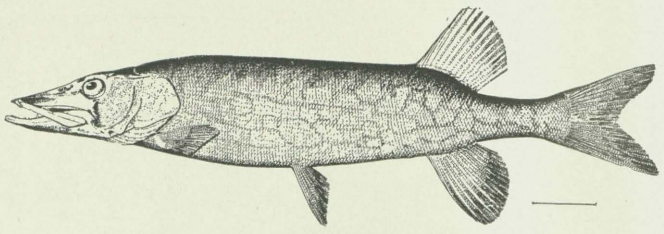
Citation, showing recorded data of the catch, will be mailed to the applicant upon receipt of application form that has been properly filled out and signed.

The receipt of any and all photographs pertaining to the registered catch, including the applicant and the fish, will be appreciated by the editor for use in Florida Wildlife Magazine.

Florida Wildlife Fishing Citations are available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the following fresh-water game fish of the prescribed size requirements:

SPECIES

LARGEMOUTH BASS ..... 8 pounds or larger	SHELLCRACKER ..... 2 pounds or larger
CHAIN PICKEREL ..... 4 pounds or larger	BLACK CRAPPIE ..... 2 pounds or larger
BLUEGILL (BREAM) ..... 1 pound or larger	RED BREAST ..... 1 ½ pounds or larger



CUT OUT AND SAVE THIS APPLICATION BLANK

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date_____
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name_____ Address_____

Species of Fish_____ Weight_____ Length_____

Type of Tackle, Bait Used_____

Where Caught_____ Date_____

Catch Witnessed by_____

Registered, Weighed by_____ at_____

_____
(Signature of Applicant)

VOL. 11 NO. 3

Florida WILDLIFE

AUGUST, 1957

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Published monthly by the
FLORIDA GAME AND FRESH WATER FISH COMMISSION
Tallahassee, Florida

★

**Dedicated to the
Conservation, Restoration, Protection of Our Game and Fish**

★

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JUNIOR CONSERVATIONIST

By DENVER STE. CLAIRE

THE GRAND OPENING for our Lake Eaton Summer Camp was during the week of June 9-15. It was a big undertaking for we were operating two distinct and separate programs at the same time. On the whole, however, considering the many problems that beset us we came through nobly.

Like any plant operation, there were details to be smoothed out. I believe all those attending camp realized this significant fact and, like good campers, saw it through.

Our first major operation for this first week was our Third Annual Camp Week for girls. A total of 63 girls (this figure includes the girl delegates) attended Camp. This is our best representation so far.

A separate program for these young girl campers was set up and we feel certain most everyone had an enjoyable time.

Our second program operating at the same time was the Sixth Annual Conference of the Junior Conservation Club League of Florida.

During the week, assemblies and clinics for clubs and their problems were conducted. In the absence of the outgoing President, the assembly elected a temporary chairman to conduct all meetings. John Collins from Stuart received this honor and did a bang-up job.

On Thursday, June 13, at Lake Eaton, the clubs elected their officers for the year 1957-58. Representatives elected for one year include the following: President—John Collins, Stuart; Vice President — Tommy Christopher, Stuart; Secretary—David Laird, Ocala; Treasurer—Tom Mawhinney, Hialeah.

Directors are to be elected at a later date.

Following is a report from the outgoing Treasurer, Henry Imhauser of Miami: $91.21 on hand as of June 13, 1957; 1957-58 League dues paid: 1. Hollywood, $5.00, 20 members; 2. Ft. Lauderdale, $14.75, 59 members; 3. Pahokee, $9.00, 36 members; 4. St. Petersburg, $11.00, 44 members; 5. Bartow, $3.50, 14 members.

The first meeting of the new Board of Directors for the Junior Conservation Club League was held Friday morning—regular business was conducted. The next meeting will be during the month of October in West Palm Beach. Tentative dates are October 12 and 13, 1957.

* * *

Thursday evening was the Annual Banquet for the League Conference. During this banquet State Awards were presented by the new President. Top award, the Outstanding Junior Conservationist of the Year 1956, was presented to Lloyd Johnson of the Allapattah Optimist Junior Conservation Club in Miami.

The Deane Mather Junior Wildlife Club of Ocala was recognized as the outstanding Junior Conservation Club of the Year 1956. The State Award was accepted by the new Senior Counselor for the Club, Mr. James DeBarry.

Gene Gallant, former advisor for the Deane Mather Club, accepted the State Award for Outstanding Counselor of Club Work.

A special award for Girls in Conservation Work was presented to Carlie Calhoun, President of the Bay County All-Girls Junior Conservation Club. Installation of officers was held during the ceremony. Addresses from the various ranks were presented during the banquet.

* * *

For the first time, a Wildlife Camp for Girl Scouts was held at Lake Eaton. During this period, Resource Education was presented to the Girl Scouts, together with the regular Girl Scout Camp Program.

Mrs. G. T. Costello directed the camp, with a very capable staff of counselors.

Waterfront Director Mary Ann Nicholls assisted her, as well as Mrs. Helen Knowles and Mrs. Patricia Coates and Miss Elizabeth Johnson.

Our own staff assisted Mrs. G. T. Costello, and included Lloyd Morgan, Sebring; Phil Alexander, Miami; Jim Thomas, Gainesville; Betty Gay Martin, Ocala; Elenor Delloroso, Ocala; and Charleen Perry, Ocala.

Added to this terrific program, other Resource Agencies were invited to participate. Some of the agencies contributing toward the program: Soil and Conservation

THE COVER

From the crystal depths of spring fed streams to the amber stained waters of swampland ponds and rivers, the highly adaptable bluegill is found throughout Florida. Most commonly called bream (pronounced "brim"), the species boasts a long string of aliases, including among others copperhead, sunfish, willow bream, and yellow belly.

Occasional specimens may weigh as much as two pounds although the average is much lower. Good scrappers and willing takers of a variety of natural baits and artificial lures, bream rate top billing with cane polers and fly rod anglers alike.

They are prolific spawners, with reproductive activities having been noted in various parts of the state during every month of the year.

Besides their value as highly prized game and food fishes, bream provide an important portion of the diet of the ever-popular largemouth bass. ●

Service, U. S. Forest Service, U. S. Geological Survey, State Game and Fresh Water Fish Commission, and the Florida Forestry Service.

CAMP DIRECTOR—We are very pleased to announce that this year camp will be under the direction of Mr. Lloyd Morgan of Sebring, Florida. Mr. Morgan is a teacher and has an excellent background in camping and conservation. He holds his masters degree in Education. We are extremely happy to have Mr. Morgan with us.

Our staff for the nine weeks of Boys Camp starting June 30 through August 31 has been completed: Phil Alexander, University of Miami; Jim Thomas, University of Florida; Roger Pierce, University of Florida; Olman Taylor, Ocala High School graduate.

* * *

During a recent convention at Biloxi, Mississippi, the American Association for Conservation Information bestowed a national honor to the Game and Fresh Water Fish Commission for its Youth Conservation Education Program in the State of Florida.—Aren't all of you proud of this high honor?

* * * *

DEGREE OF THE COON

Requirements for Degree:

1. Can be member or non member.
2. Name five mammals. Give habitat and principal foods (Lake Eaton Area).
3. Identify five fresh water game fish. Give a written report on any one game fish.
4. First aid. Rescue and artificial respiration.
5. Fire building (flint and steel).
6. Name four predatory animals. Give control measures (natural and artificial).
7. Identify six land birds. Give habitats, food and uses to man.
8. Must have completed a conservation project beneficial to Camp. Project must be discussed with Camp Director for approval.
9. Must have completed previous degrees.

NOTE: Must have attended three previous camping sessions in addition to present camping session at Lake Eaton.

Photo by Ralph Voss

Standing in line to register their catches were these two freckle faced brothers, hopeful entrants in the Fishathon recently conducted by the Clearwater Lions Club and assisted by the Game and Fresh Water Fish Commission.

dog chatter

By GEORGE CROWLEY

DOGS DIFFER from all other animals in one basic way. While almost any animal can be a pet, the dog is the only animal that instinctively seeks out man and values his affection above all else.

A horse, for instance, never forms the same close attachment to his owner that he does to another of his own kind. There are many instances of a horse going off his feed when separated from his stable mate. But whoever heard of a horse getting worries because his owner disappeared? Yet there are thousands of cases of dogs going to skin and bones in only a few days under similar circumstances.

It is, of course, this trait of devotion to humans that makes the dog the most popular pet and the easiest of all animals to train. For a dog wants nothing in the world so much as to please a human being.

It is almost axiomatic that the best trained dog is the happiest dog — contrary to the belief of many who know little about dogs.

The more things a dog is taught, the more opportunities he has to win praise, which is the one thing he wants. And no dog can be taught very much without the lavish use of praise.

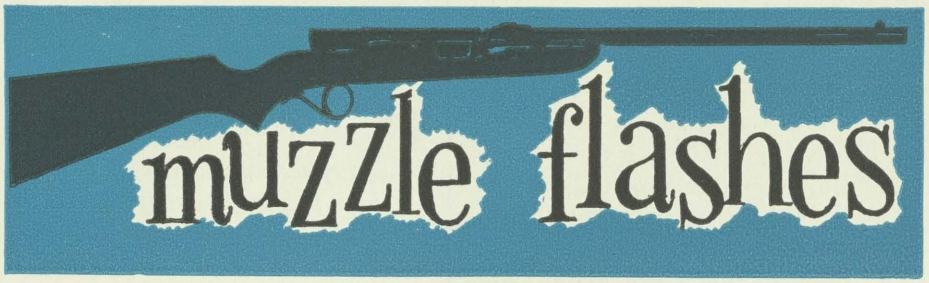
The dog that is under complete control — that sits, heels, comes, goes, lies down, and stays, knows that every time he follows a command he is pleasing his master. He has been praised hundreds of times for so performing during his training period and it makes him happy to do the things that he knows make his owner happy.

Training Your Puppy

A puppy is a very simple little animal. All he wants in life is a reasonably comfortable home, nourishing food, care when he is sick — and just one more thing — he wants to please you and make you proud of him.

Your number one training task is

(Continued on Page 42)



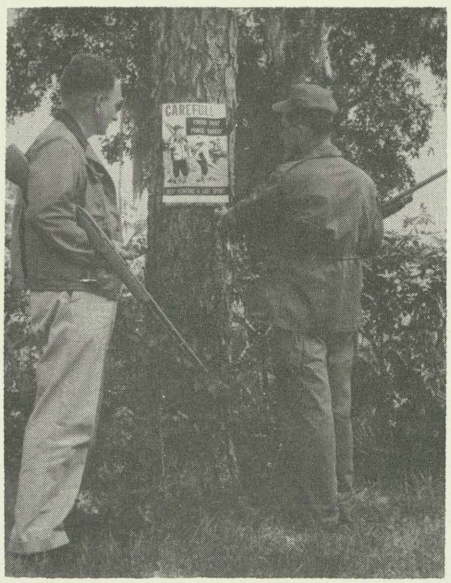
BY EDMUND McLAURIN

LIKE THE PATIENTS of doctors and the clients of lawyers, shooters have their problems, too. Many of these personal troubles are acutely real and serious, while others are relatively simple and, in some cases, partially or totally imagined. Quite often, when advice is sought of a qualified person, it is as difficult to convince a confused shooter of simple truths as it is sometimes hard to explain to an inquiring youngster that soap is a detergent but that a detergent is not necessarily always soap!

Individual problems, especially those concerning gun selection and gun fit, sight adjustments, correct stock dimensions, ammunition selection, shooting habits and others of personal nature generally wind up on some gun editor's desk — this one's included—where they are usually solved or referred to contemporaries specializing in specific phases of gunology.

But others, of general or group import and usually unrelated to the common objective of hitting selected targets regularly—which is the essence of shooting, frequently continue to plague shooters simply because they do not know the proper authority to consult. Some shooters do not know to whom to turn for answers to questions like, "Where can I get plans for building a small, but safe backstop for rifle and pistol shooting?" . . . "Who has films on shooting subjects that can be borrowed or rented and shown to our club members and guests?" . . . "Where can I get material giving ideas for enlivening our club's shooting matches?" . . . "Where can I get free targets?" . . . "Is there available guidance material for adult instructors of junior rifle clubs not affiliated with the National Rifle Association?" . . . "Where can we get weather-proof, colored hunting safety posters for our club's leased hunting acreage?" . . .

Answers to these questions and similar ones relating to shooting activity can be had at no charge from the non-profit Sportsmen's Service Bureau, 250 East 43rd Street, New York 17, the public service division of the Sporting Arms and Ammunition Manufacturers' Institute.



Two Florida deer hunters express approval of the colored hunting safety poster FLORIDA WILDLIFE's gun editor tacked on a tree bordering an Ocala National Forest roadway, last hunting season.

Such posters, in three colors and printed on weather resistant paper, can be obtained very cheaply from Sportsmen's Service Bureau, 250 East 43rd Street, New York 17. Clubs can contribute to state-wide hunting safety by obtaining quantities and posting them in areas of heavy hunter concentrations.

Although the shooting public seemingly is just beginning to become aware of its many free, helpful services to individual shooters, clubs, youth education leaders and gunsmiths, the service organization is not a newly-created enterprise. The SAAMI has been operating as a public service since 1926, the year it was formed as a non-profit trade association of American makers of firearms and ammunition. Like the stand-by services of Travelers' Aid, the consulting services of SAAMI have been available to shooters needing assistance; the trouble has been that not many of the outdoor magazines have even mentioned its existence.

Until his retirement to picturesque acreage in Ocala-Oklawaha River hunting country, the late Stewart Comeaux was for many years the organization's head man. Now the New York office is managed jointly by Harry Hampton, Jr., who directs the Sportsmen's Service Bureau for SAAMI, and Richard F. Webster, Secretary-Treasurer of SAAMI, parent oganization.

Field personnel include seven sectional representatives who maintain local residence and operate within or adjacent to home-state areas. Four of these men are concerned solely with rendering helpful service connected with the promotion of inanimate target shooting activity, which includes skeet and trap shooting, rifle and pistol clubs, junior training, firearms safety and other related phases. The remaining three devote full time to helping obtain better live game hunting, re-stocking depleted areas and establishment of pay-as-you-go shooting preserves. In the latter work category, most emphasis is placed on getting sport shooting facilities convenient to sizeable urban populations — especially in localities where a sportsman has a tough time finding suitable, convenient and safe places to enjoy his guns.

Because the future of hunting and target shooting depends on common sense handling of firearms, the

SAAMI places considerable stress on the firearms and hunting safety phase of its public service program. "The Ten Commandments of Safety," an illustrated leaflet listing the most important rules of gun safety, is supplied free upon request to individuals and groups interested in furthering distribution to every potential firearms user, and most of the firearms manufacturers now include one in each boxed firearm going to a dealer or consumer.

Since 1940, the SAAMI has supplied accident prevention posters in quantity at half their actual cost to state game commissions, gun clubs and conservation groups for posting wherever shooters are likely to see them. The placards are 12x18 inches in size and are printed in three colors on weather-resistant stock. (The editor of MUZZLE FLASHES recommends that the Florida Game Commission and Sunshine State shooting clubs obtain and post them throughout popular hunting areas like Ocala National Forest, Eglin Field, Gulf Hammock and similar state land areas that each season have heavy concentrations of hunters. From a license revenue allocation standpoint, it certainly seems logical that four to six cents of the purchase price of each issued hunting license could be spent to enhance the field safety of the licensee and help keep him alive to purchase succeeding seasons' licenses!)

"Shooting's Fun for Everyone" and "What Every Parent Should Know When a Boy or Girl Wants a Gun" are two free, profusely illustrated booklets that tell the story of how youngsters can be safely taught expert marksmanship.

For qualifying junior marksmen for a special shooting award, and for close-range sighting-in of .22 caliber rifles by adult shooters, free targets are supplied in reasonable quantities upon request.

Of especial interest and value to adult shooters are two instruction handbooks — "The Handbook of Small Bore Rifle Shooting" and "The Handbook of Shotgun Shooting." The first, written by Col. Townsend Whelen, famous hunter and firearms editor, groups and illustrates the various makes of .22 caliber target shooting and hunting rifles, graphically explains sight adjustment, tells how to build both indoor and outdoor rifle ranges for group use, gives secrets of successful field shooting of wary varmints and provides a guidebook that, if followed, will lead to the development of a high degree of rifle marksmanship. Maybe you've already seen a copy; more than 410,000 have been printed and distributed to date!

SHOOTING FUN FOR EVERYONE
THE WHY, WHERE, WHEN AND HOW OF RIFLE SHOOTING FOR BOYS AND GIRLS
COMPLIMENTARY COPY
HANDBOOK ON SMALL BORE RIFLE SHOOTING
THE 10 COMMANDMENTS OF SAFETY
COMPLIMENTARY COPY
HANDBOOK ON
SHOTGUN SHOOTING

Shown are four of the many interesting and helpful publications distributed free or at nominal cost by the Sportsmen's Service Bureau, non-profit New York division of the Sporting Arms & Ammunition Manufacturers' Institute.

FW's gun editor considers the pictured rifle and shotgun shooting handbooks among the best adult instructional texts available.

"The Handbook of Shotgun Shooting" is an equally fine instructional book for the scattergun enthusiast who wishes to improve his proficiency with the smoothbore. Detailed, illustrated texts are included on such phases as gun selection and shotgun stock fit, shooting stance and swing, snap shooting, deliberate leading and pointing out, how to shoot trap and skeet, hunting of upland game and waterfowl — all of value to the shotgunner, regardless of his present knowledge. This manual, too, is 25¢, postpaid.

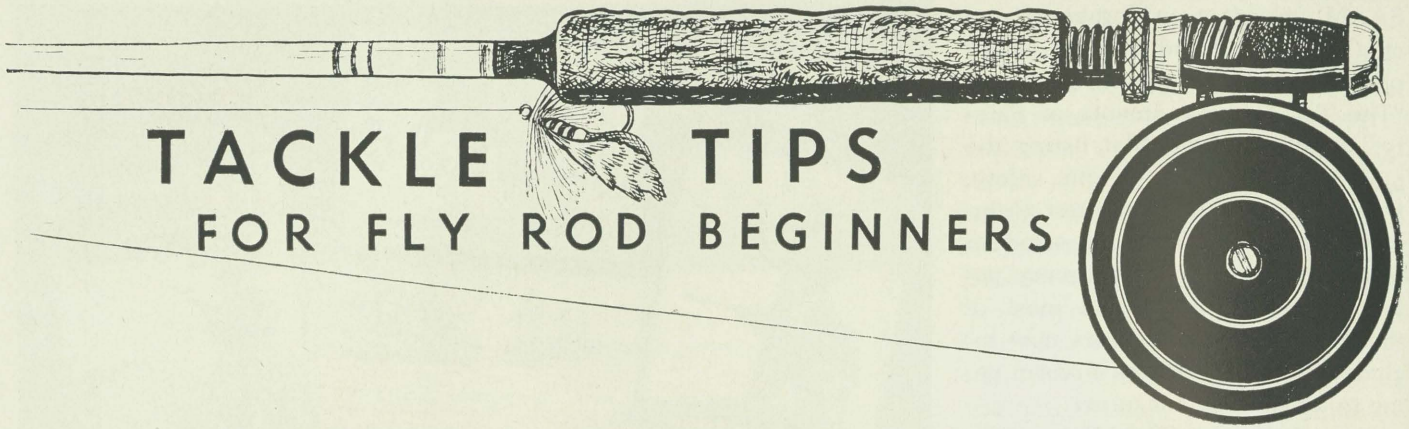
Free for the asking is a new, 24-page booklet — "Shotgun Fun for Everyone"—devoted to all phases of trap and skeet shooting.

Florida firearms dealers can get reasonable quantities of all three booklets, no charge, upon direct request to the arms companies (Remington, Winchester and Savage), whose products they sell. More dealers should obtain these fine instruction manuals and give one free with each gun sold, for maximum customer service and resulting good will.

For those interested in establishing and operating shooting preserves at lowest possible cost, there is a special packet of free material on the subject.

Groups wishing to build portable, easily set up, part-time rifle and pistol ranges can get a special four-page illustrated text for the asking.

SAAMI's Film Loan Department will arrange for group or TV showing of a highly entertaining and instructive 16 mm. sound film, "Shooting Safety," and can put you in touch with other sources of such fascinating 16 mm. sound film titles as "Gunning the Flyways," "Showman Shooters," "The Canada Goose," "The Bob White," "Trigger Happy Harry," "With Gun and Dog" and "Tomorrow We Hunt." Most are available without charge, except transportation costs. ●



TACKLE TIPS
FOR FLY ROD BEGINNERS

BY MORRIS SHAW

Fly fishing has long been a favorite with the light tackle clan. Here are some pointers and tackle tips for the novice.

TO MANY FISHERMEN, the fly rod seems possessed of an almost mystic quality requiring some vague ill-defined special sense to handle successfully. Perhaps the tyro has witnessed one of those rare and beautiful displays of rod work on the part of a master fly fisherman. Seeking to copy the skill and fish catching ability of the expert, he buys a split bamboo fly rod, "a cheap one just to learn on," he tells himself, and goes forth to a favorite lake or stream.

Chances are his bargain basement rod has the slow droopy action of a sweet gum shoot. His line is almost certain to be too light or too heavy for the rod.

After a trip or two marred by constantly tangled line and with his trail around the waterway blazed by an assortment of lures left dangling in the tree tops, he has had it. The new tackle is put away in the garage or in the store room and the would-be fly rod fisherman retires from what he considers the select circle. Perhaps he takes up spin fishing with its less complicated methods; but fly fishing?—he leaves the field to those blessed with the special touch and a sock full of money to buy the expensive gear required.

Photo by Bill Hansen

Because of swampy, heavily timbered shore lines and soft bottoms, many of Florida's lakes and streams are boat fishing waters only. Two fly rodders, with their small outboard idled down, take turns working over a promising bit of shore line on Lake Talquin near Tallahassee.

On two counts his ideas are far off base. For one thing, the price of an adequate fly rod outfit does not require that the family jewels be put into hock. For another, a prospective fly rodder does not have to worry too much about any special touch. True there are anglers who can perform wonderful feats with fly rod form that is beautiful to behold but these are far in the minority. Almost any angler, with a little practice and the proper gear, can become skillful enough to take fish on the fly rod the first time out.

There seems to be some confusion

as to just exactly what is meant by fly fishing. To be one hundred percent correct in the matter, perhaps fly fishing should mean exactly that —fishing with artificial flies. In actual practice however, the Florida fly-rodder is more likely to use one of the many varieties of popping "bugs" or some of the other small fly-rod sized lures. This certainly does not mean that the conventional wet flies, nymphs, and dry flies so commonly used on western and northern trout streams have no place on Florida waters. On the contrary, some southern anglers use nothing else. The light bodied cork, wood, rubber, or plastic "bugs" are somewhat easier to handle and they are often highly effective on bass, crappie, bluegills, and other panfishes.

Photo by Wallace Hughes

Where there are lakes with firm bottoms, many fly rod fishermen choose to wade. Some beginners with the fly rod have the idea that the longer the cast the more likely is a catch. This is seldom the case for the more line that is out, the more difficult it is to hook a striking fish.

Be that as it may, let's take a look at the tackle needed by the beginning fly rod fisherman.

ROD—in the years before World War II, fly rods were made of split bamboo practically to the exclusion of all other materials. There were a few hollow metal fly rods around, it is true, and some of them had fairly decent action despite their weight but all in all most fishermen considered them far from completely satisfactory.

In recent years, development of the hollow glass rod has been a boon to fly fishermen. Modern glass rods are light in weight but still have sufficient "backbone" to overcome the undesirable dead, willowy action of the "bargain basement" split bamboo rods. Better yet, their relatively modest costs puts them within the reach of the budget conscious angler who does not find it possible to put out the money required to buy a really good split bamboo rod.

In the matter of rod length, it seems that somewhere along the line, the nine-footer came to be regarded as standard. Just why this is true is not too clear. From personal experience, as well as the experience of other average, non-expert Florida fly-rod men, a rod length of eight feet is more satisfactory for all around use. A seven foot rod or one of even shorter length may be more useful if you often fish the brush-grown creeks where the long rod spells little but trouble.

There still rages among many of the more experienced hands an argument over the merits of glass rods as opposed to those of split bamboo. There is no doubt that a high quality bamboo rod made by a skilled craftsman is a joy to behold and pleasure to use. On the other hand, a well made glass rod may have an action so much like the more expensive hand-made cane product that none but the most experienced fly rodder could definitely say that one is better than the other.

For most of us, a well-made glass rod serves the purpose nicely. It has excellent action and, an important point, it can withstand a good deal more hard use, and even abuse, than the cane wand.

For general all around use under Florida pan fish-

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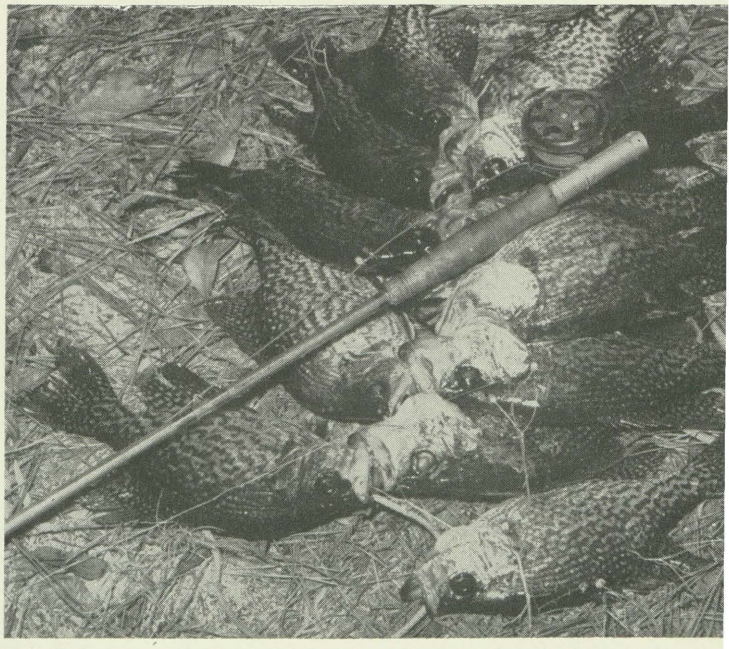

Photo by Morrie Naggiar

A bucktail fished deep around a sunken brush pile added up to some real fly rod sport for the angler who took this string of speckled perch.

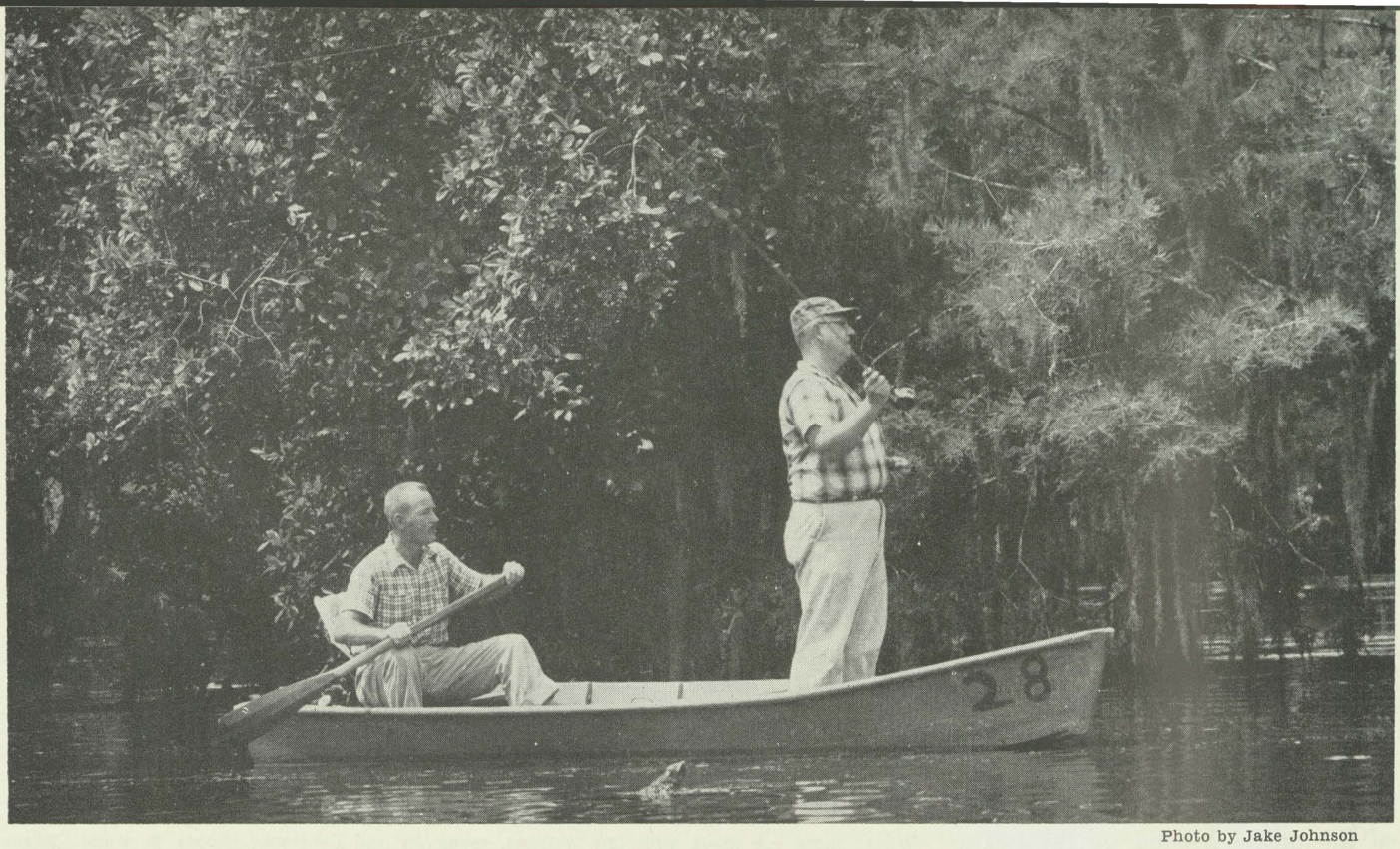

Photo by Jake Johnson

Working a popping bug or other fly rod lure from a slowly paddled boat is a popular and productive way of fishing many of Florida's waters. Largemouth bass as well as bluegills, crappies, redbreasts and other panfishes readily strike a variety of small fly rod lures.

(Continued from Preceding Page)

ing conditions, an eight foot, medium (dry fly) action glass rod is a good choice. Such a rod will weigh something in the vicinity of 4 ounces. The cost varies from about $35.00 for a real quality rod to something like $10.00 for a fair, reasonably satisfactory one. As with most other things, you get about what you pay for. One should not expect the same degree of satisfaction from the lower priced rod as from the more costly.

One other point in this regard; the cheap, bargain priced split bamboo rods are seldom suitable for anything but bait fishing. If your wallet dictates the purchase of a low cost rod, by all means select a glass one. It will give you more satisfactory service than a split bamboo of the same price range.

REEL—The fly-rodder has available two general types of reel: the automatic and the single action job. In fly rod fishing for pan fishes, the reel serves only as a convenient device for holding the line. You do not play the fish "off the reel" as is the case with spinning and bait casting rigs. Rather, you manipulate the lure and hooked fish by finger action of the left hand on the line.

Some anglers prefer the automatic reel. The automatic allows line to be stripped freely off the reel for making the cast and winds in excess line with the touch of a finger. Automatics are convenient but they tend to be heavy. A carelessly placed finger touching the rewind lever may whip in line at the most inopportune times.

Single action reels are much lighter in weight than automatics of the same line capacity. To take in excess line, they must be cranked in the manner of other types of reel. For panfish angling, a small single action reel is satisfactory. Although not always as convenient as the automatic, light weight and lower cost are factors which make them popular with many fishermen.

For large bass and for general salt water fly-rodding, a large line capacity, good quality single action reel is required. Contrary to the case when panfish angling, large, hard fighting fish that make long, fast runs make playing "off the reel" a necessity.

For the beginning fly-rodder forced to cut corners financially in selecting his outfit, it is much better to choose a low cost single action reel and put any extra cash into a better quality rod.

LINES—Unlike spinning and bait casting lines which sink beneath the surface of the water, the fly line floats on top. During recent years, manufacturers have made great strides in producing fly lines with "floatability" built into them. In former times, the angler found it necessary to dress the line frequently to keep it floating properly. With the new, high quality floating lines, very little attention is required to keep the line in top condition.

Fly lines are available in various diameters. These sizes are indicated by letters. By the American standard, fly line diameters are as follows: H, .025 inches; G, .30; F, .031; E, .040; D, .045; C, .050; B, .055; A, .060; AA, .065.

For ordinary fresh water angling, a level line is

thoroughly satisfactory. It is important that the line balance the rod however. Most manufacturers recommend a specific line size for each particular rod. Line size suggestions should be followed closely for a line that is either too heavy or too light for the particular rod will not give good casting performance.

Tapered lines, as the name indicates, taper from the main body of the line to a smaller diameter on the end. The idea is that the heavier main body of the line provides the weight required to boost the light fly-rod lure out to the fish. Special lines feature bug or torpedo tapers in which the diameter of the main line body is stepped up or down through various diameters. For the special purpose for which they are designed, these specialized lines are extremely useful. At first, it is better to stick to the level line. The difference in cost between a quality level line and a double tapered or torpedo head line is considerable, from something slightly less than $3.00 for the level line against approximately $9.00 for a tapered job.

Beginners with the fly rod often have the idea that the longer the cast the more likely is a catch. Actually there is little truth to this idea except perhaps when working unusually clear waters where the fish may be skittish. It will soon become obvious that the more line that is out, the more difficult it is to hook the fish on the strike. There is the matter of a time lapse between the actual strike and the upward hook-setting lift on the rod. Many times a fish will mouth an artificial and instantly reject it; often so rapidly that even a short pause between the strike and the angler's reaction is sufficient to cause a missed fish.

LEADERS—For most Florida fresh water fishing a six-foot long, level leader of six pound test nylon is about right. This will handle popping bugs, large flies (those tied on number 6 hooks are most commonly used for panfish), bucktails, spinners, and other fly-rod sized artificials.

For extremely clear waters, tapered leaders are useful but under most Florida fishing conditions, it is seldom that they are called for. Tapered leaders consist of nylon or natural gut strands of progressively smaller diameter. Their construction allows the delicate presentation of the smaller flies normally used in clear water fishing.

LURES—Popping bugs are probably the most popular lures with Florida fly-rodders. They come in a variety of sizes, colors and styles. To be properly prepared, the angler should have at least three sizes. Those with hook sizes 1, 6, and 10 will make a fair basic selection. Color seems not so important at times but at others the fish have definite ideas along those lines.

Yellow and white are both good color choices. They have the added advantage of being easily seen by the fisherman. This is important, especially when the surface of the water is ruffled by wind or current, conditions under which it is difficult to follow a dull colored lure.

Most anglers favor popping bugs over the sinking

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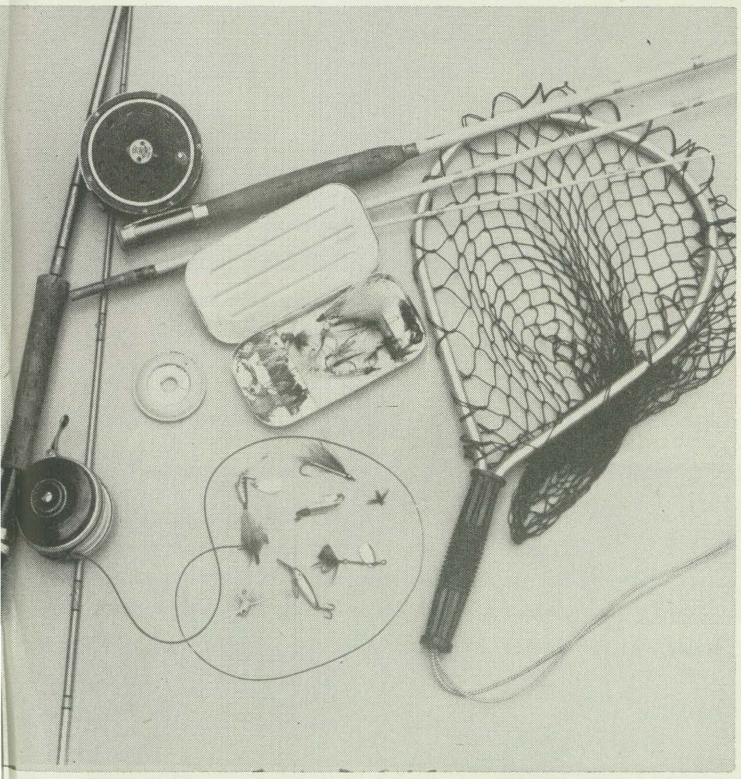


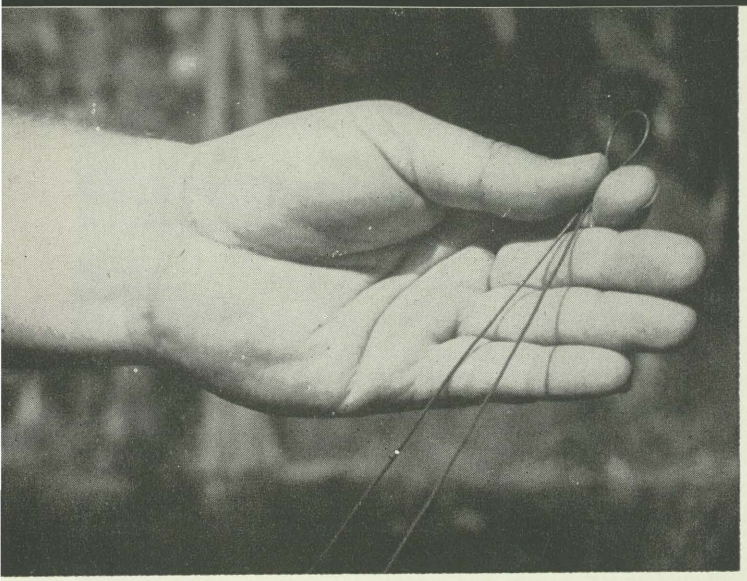
Photos by Wallace Hughes

Basic fly fishing equipment. At left, medium action rod with automatic reel; at top, stiffer, bass action rod with single action reel.

Wading fly fishermen often find a landing net extremely useful in handling largemouth bass, shad, and other good-sized scrappers.

FLY CASTING

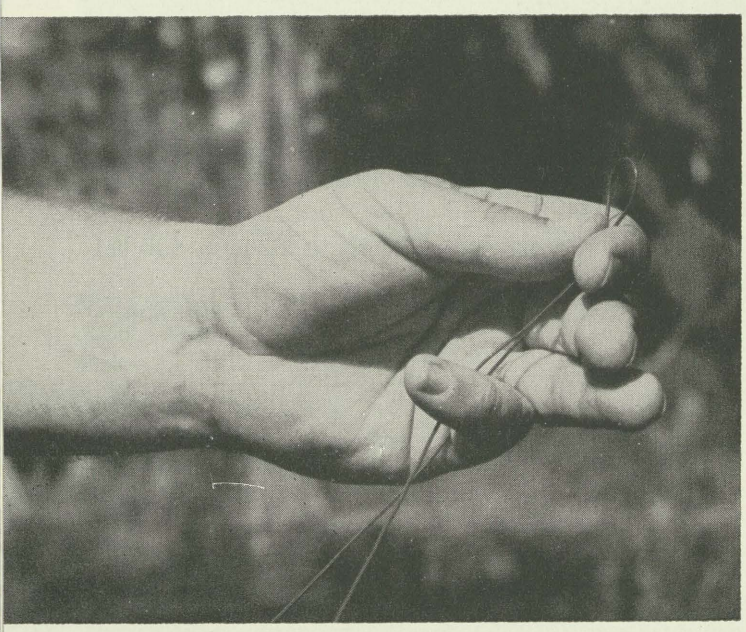
BY MORRIE NAGGIAR



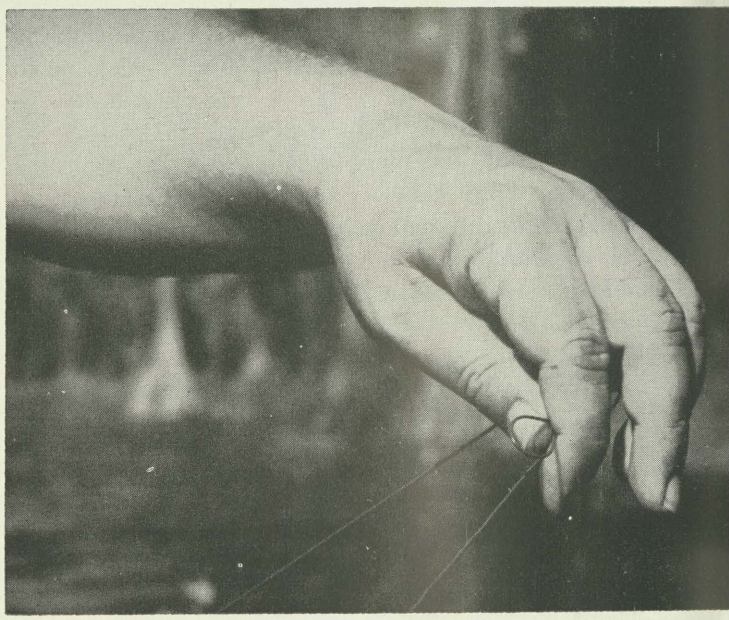
In fly fishing, one hand handles the rod, the other manipulates the line. In this series is shown one variation of an easy to learn hand retrieve.

Step 1. Thumb and first finger grasp line.

TIME WAS when a perusal of angling literature gave the impression that only the real artist with the fly rod could accomplish anything worth while with the light and slender fishing wand. Those of us who took the word of the experts found ourselves somewhere between a sweat and a nervous collapse trying to develop the championship techniques we were led to believe essential to fly fishing success. So engrossed did we become in the mechanics of perfection casting that the formerly pleasant pastime of conning a fish into clamping down on a feather and steel imita-

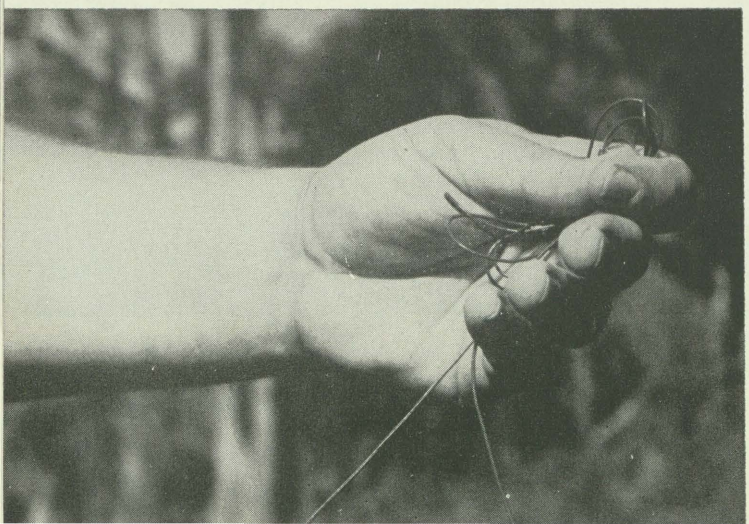


Step 2. Palmed line is held in place by little finger.

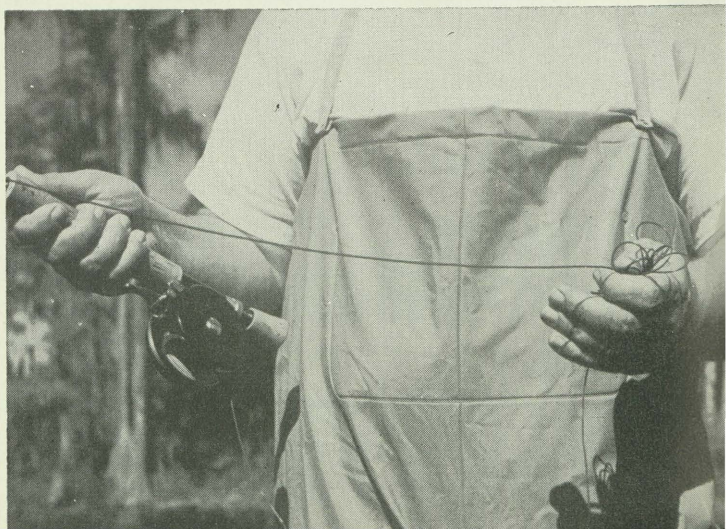


Step 3. Hand is turned down to grasp more line.

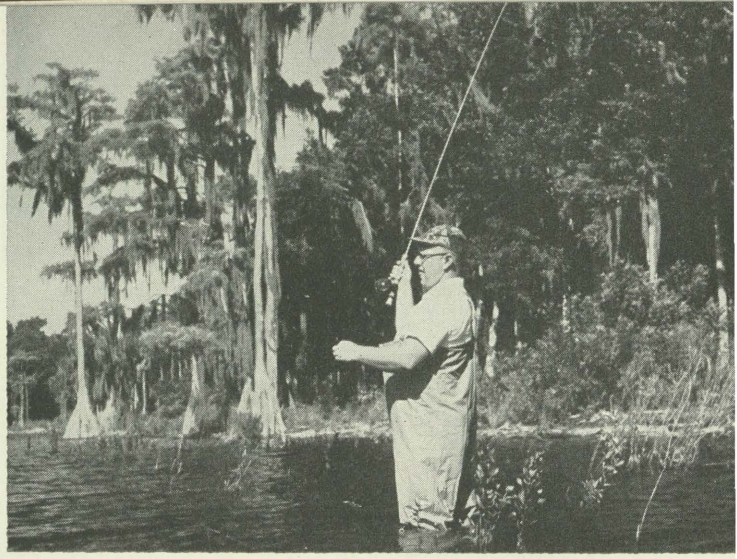
Step 4. Retrieved line is held folded in palm.



Step 5. Relation of hands during pickup.

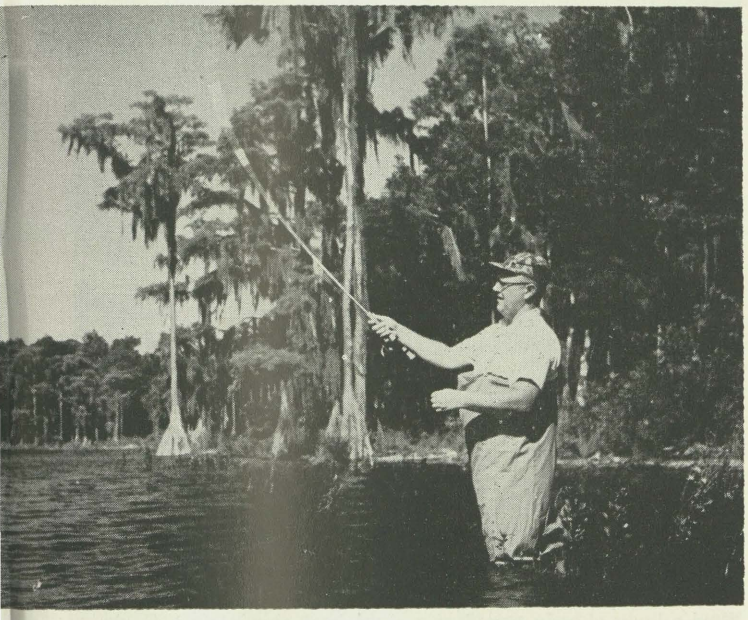


Preparing to cast, strip about 20 feet of line off reel, holding line loosely in left hand. Take up the slack and begin the cast with rod at approximately the angle shown.



Pick up the line from the water with a sharp upward lift of the rod. The line will drift back in a wide loop that quickly straightens out behind the caster. Rod should be stopped at about position shown.

Photos by Bill Hansen



A slight pull on the rod tip signifies the line has straightened out behind the caster. Immediately whip the rod forward with a sharp smooth movement. Stop the rod at about the 10 o'clock position as above.

Release the line and let it pull freely from the left hand. The rod drifts downward as the line shoots out through the guides. Successful fly rod casting depends a great deal on getting the "feel" of your equipment.

When the lure hits the water, immediately gather in the slack and be alert for a strike. Vary the speed and the method of your retrieve. A quick pull on the line with left hand will set hook when fish strikes.

tion of something delectable to fishly palates became a struggle for the picturesque form, with hooking fish a weak, trailing second.

It took shock therapy at the hands of an eleven-year-old neighbor boy to snap the well-entrenched preoccupation with the fly casting form divine. Three trips running, with a heavy, telescoping steel rod and a buck fifty reel, he popping-bugged me to a standstill, hand-built fly rod, expensive reel, triple-tapered line and all.

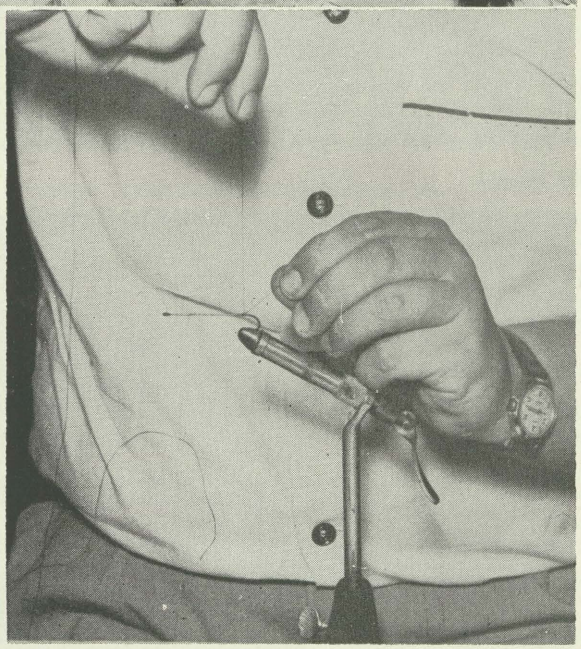
Those three trips I count as my most valuable fishing experiences, bar none. They broke the spell of "expertism," the preoccupation with the mechanics of fly casting. Now I'm back where I started—an abomination in the eyes of the champion "pure formist" but I have rediscovered fly casting for what it really

(Continued on Page 37)

BASIC FLY TYING

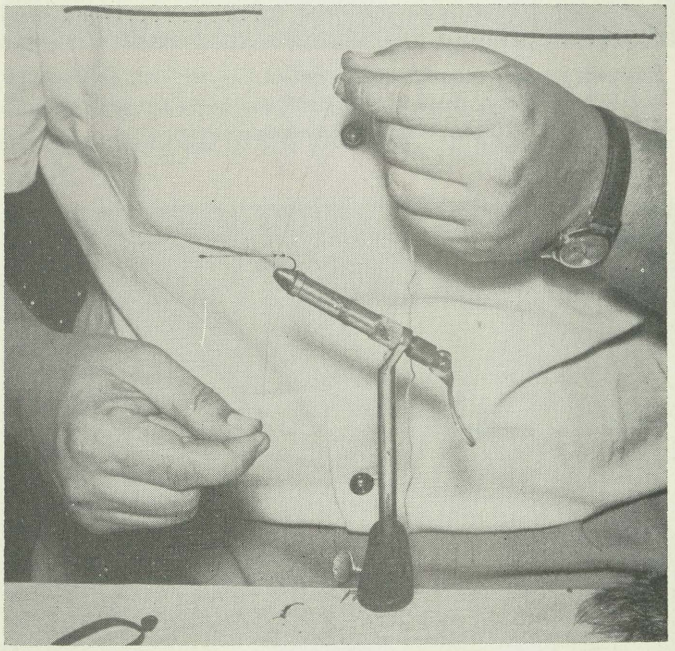
By FERRAL J. HILL

Streamers are the easiest of flies to tie. The fundamentals involved are basically the same as for the most complicated or fly patterns. They offer the beginner an opportunity to "get the feel" of fly tying before attempting some of the more difficult types.



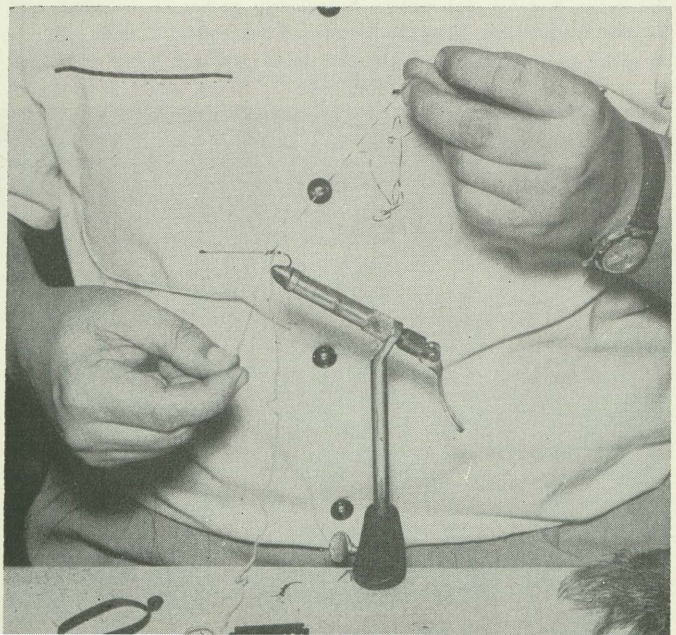
A long-shanked hook is firmly clamped in the fly tying vise. A two foot length of tying thread (nylon or waxed silk) is attached to the hook shank by holding one end of the thread in left hand and bringing the thread in back of hook and up with right hand, crossing over on itself with several turns. Secure with a couple of half hitches and clip off surplus end.

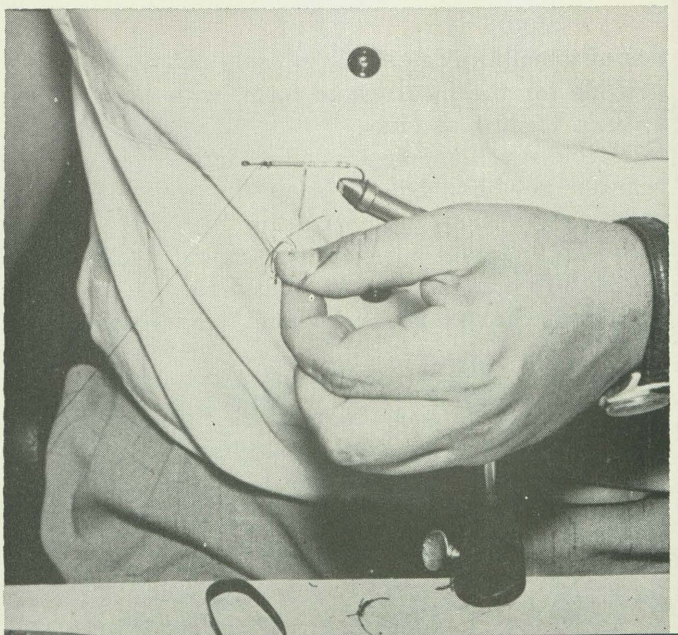
Using the same method, tie in a length of body tinsel. You now have three pieces of material tied into the rear portion of the hook shank; the tying thread, the body floss and the tinsel. This is for a tinsel-ribbed bucktail streamer.

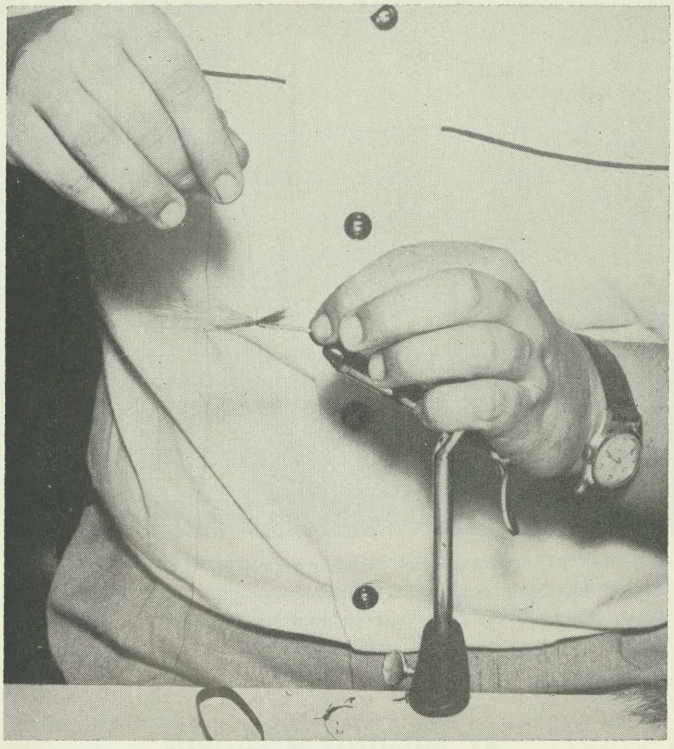


Select a piece of colored body floss (rayon, silk, or wool yarn) and tie it in near the bend of the hook. To do this, hold one end of the floss in the left hand along the shank of the hook. Take several turns of tying thread over the floss and hook shank and secure with two or three half hitches.

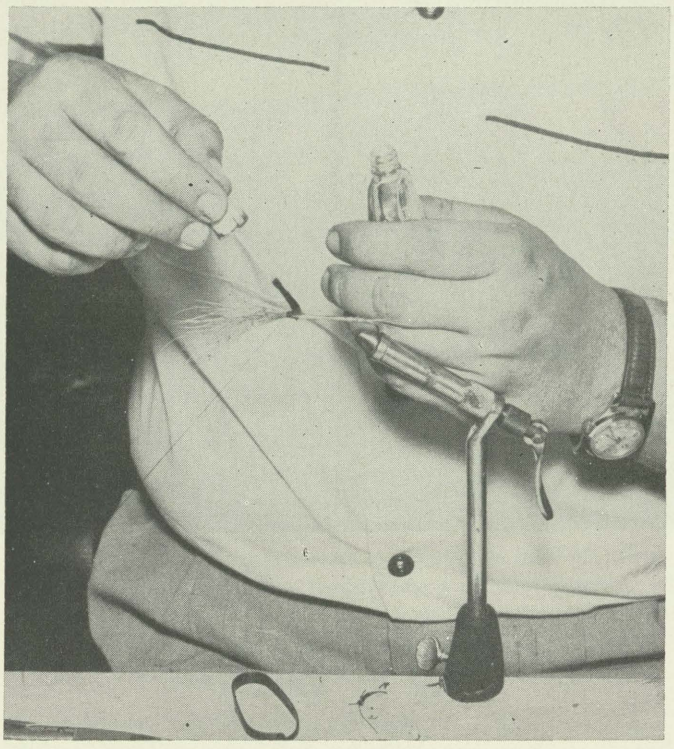
Wind a layer of body thread around the hook shank to within about one-quarter inch of the hook eye and secure with several half hitches around the shank. Treat the wound thread with a coating of waterproof cement. Next wrap the body floss in a similar manner. Repeat with the tinsel, evenly spacing the winds to form "ribs".





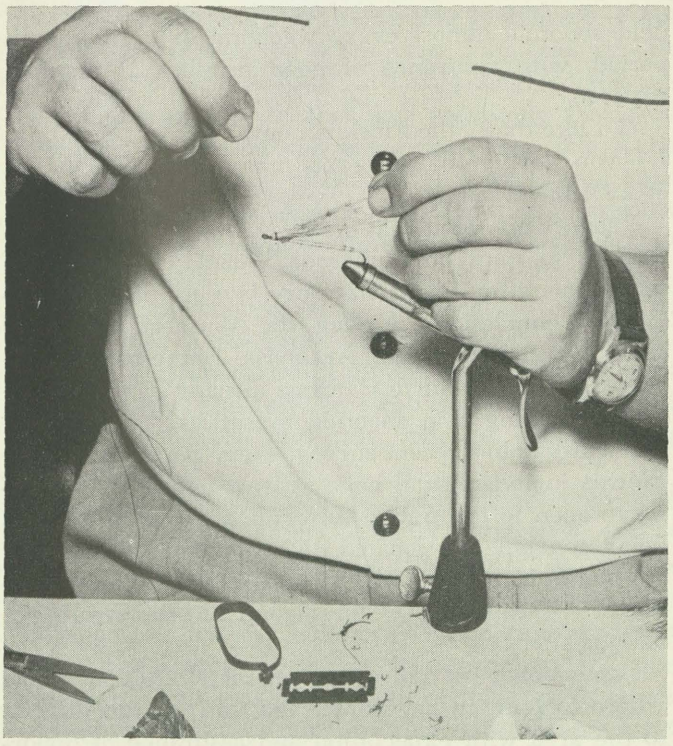


Clip off a small bunch of deer tail hair, even up the butt ends with a sharp scissor. Hold the hair on the forward end of the hook shank so they extend forward and secure with several windings of the body thread.

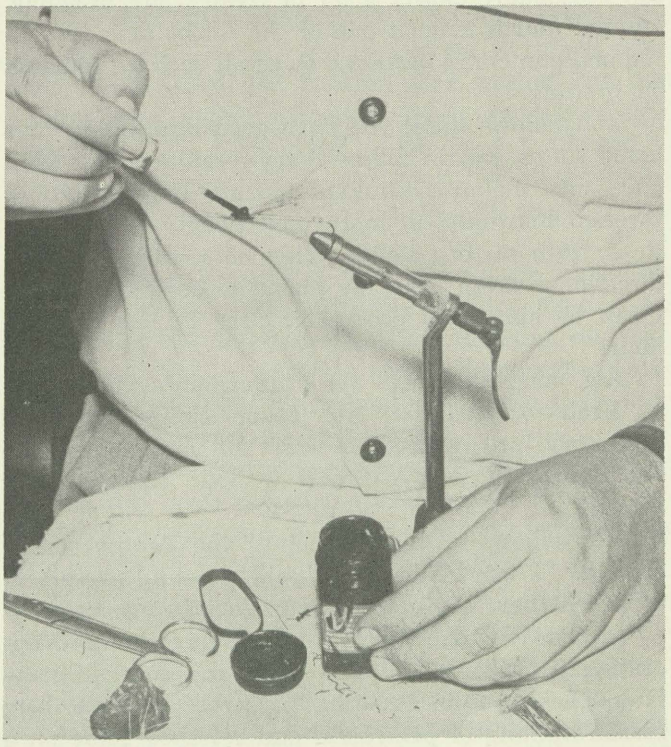


Put a drop or two of cement on the wind to more securely fasten the hair wings into the proper position. These same instructions may be followed to produce a feather winged streamer.

Photos by Bill Hansen



Grasp the bunch of deer hair and bend it back over the fly to form the streamer wings. Tie into position with several windings of thread over the doubled back bases of the hair. With the remaining body thread, wind around head of fly smoothly and firmly.



Build up a tapered head from the eye of the hook and secure with several half hitches. Give the head of the fly a thorough coating of cement or finger nail polish after carefully clipping the loose end of the tying thread. Experienced tyers use whip-finish on head for neater appearance.

Although pheasants do not reproduce in the wild in Florida, pen raising the birds can be a profitable venture. Five minutes after being released, the birds are as hard to locate and kill as their wild cousins.

PUT SIX– –TAKE FIVE

BY EDMUND McLAURIN

Is paid shooting preserves the answer to future hunting success? The advantages appear numerous.

WHEN A FLORIDIAN, a Californian and a Texan are conversationalists in the same group, listeners can reasonably expect a bit of rivalry and bragging, but the fourth man at one of the tables of a Florida rod and gun club's barbecue awed all with his remarks on hunting.

"You fellows think you have good hunting in your home states, but in mine—Pennsylvania—I can hunt pheasants, mallards, chukars and quail from October through February, at more than twenty choice locations, with no bag limits. Why, no matter in which direction I drive from my home in Lebanon county, I can be hunting a productive area in less than an hour!"

"Aw, you're kidding!" the Californian challenged.

"Yeah—or poaching!" the Texan scoffed. "Federal migratory bird regulations won't let you shoot ducks six months of the year and without observed bag limits!"

"You fellows missed the point," the Pennsylvanian replied. "I was referring to paid shooting preserves, of which there are more than twenty in my state.

"Licensed by the State Game Commission and operating in accordance with state and federal game laws, these public shooting preserves provide long season hunting of pen-raised and released game on a 'pay as you hunt' basis. The released birds are hunted in natural surroundings and are just as hard to hit as their wild cousins.

"The primary attraction to me is that I can enjoy field shooting almost every weekend of a six month period, with assurance of good hunting at nominal expense."

"I'd like that!" the Floridian enthused. . . . So would I — you, too, probably — and many other FLORIDA WILDLIFE readers!

Chances are good that we all will soon have opportunities to hunt on numerous Florida shooting preserves operating under statutory law or rulings of the Game Commission. Among the southern group of states, Virginia, Georgia, Arkansas, Tennessee, Louisiana, Kansas and North Carolina already have successfully operating paid shooting preserves.

According to a recent survey, every Southern state—Florida included—will have at least one shooting preserve open to the public this Fall, with most of them being conveniently located near population centers.

Visitors to Florida who have hunted on paid shooting preserves in other states point out numerous advantages . . .

Convenience is no minor attraction. You know where to hunt to bag game, and you can go directly to the area with expectation and assurance of opportunities for shots. You cannot but gamble when making the rounds of free open-to-hunting land tracts during a short hunting season; only on a paid shooting preserve, or a privately-owned, heavily fenced-in and

Dog men are enthusiastic about paid shooting preserves now operating in several Southern states. They especially like the represented convenient training acreage and the abundance of birds to be found.

Although the chukar partridge will not flourish in the wild under Florida conditions, the species would make good release targets of paid shooting preserves—and a popular one with bird dog lovers.

guarded tract, can you rate your hunting chances better than an even 50-50. . . .

A shooting preserve can be operated in a farming area close to population centers and makes hunting possible where no wild game or hunting privileges now exist. Where necessary, abutting small farms can jointly organize to create a shooting preserve.

Further, with steady, annual increases in the number of hunters afield each regular hunting season, more and more hunters are finding it difficult to get permission to hunt on wild game inhabited private property. "No Hunting"—"No Trespassing"—signs, unfortunately, mean just that, and seemingly are to be found on every tree and fence post when one starts looking for a nearby place to bird hunt. Many such posted areas could become paid shooting preserves, appreciated by patron hunters and profitable acreage to their owners. . . .

A shooting preserve is an ideal location for a father to introduce a maturing son to field shooting. Uncrowded and assured of a number of reasonably good shots at game, the two can establish lasting principles of good teamwork and safe, efficient gun handling afield. . . .

Visiting sportsmen-friends and business men with known hunting preferences, but limited time, can be given a good time afield by their hosts, at nominal expense. . . .

Congested living and highway traffic have made the keeping of a bird dog in the city a problem, and city-kept bird dogs are declining in numbers. It is discouraging to invest up to $300 in a good, trained hunting dog and then run the increasing risks of his urban maintenance.

But most shooting preserve operators own and work trained hunting dogs to retrieve cripples and reduce stock losses. In some cases, use of a dog is part of the charged hunting fee; in others, there is an extra charge for the trained canine and his handler.

Where the paying hunter has his own dog, the preserves offer perfect field settings for their training and working. Dog men are enthusiastic about the convenience of available training acreage and birds to be found. . . .

Your hunting safety factor is increased when you hunt within the boundaries of a paid preserve. Most operators take care to assign and restrict each small party to a designated hunting area, and to see that fundamental safety precautions are understood and observed. The intoxicated patron is not allowed to hunt, and persons who imbibe after they start hunting are courteously but resolutely denied preserve use privileges.

The preserve operator, being a business man, fully realizes that his continued success and income depends on making his shooting preserve attractive and safe to patrons. You, as a paying guest, agree to reasonable conduct rules when you enter the preserve to do your hunting; otherwise, you don't hunt!

Where patrons are inexperienced in the safe handling of firearms, most preserve operators take time to give brief demonstrations or arrange for an experienced shooter to accompany the party afield.

An operator, or sponsoring group, of a paid shooting preserve can now get—and should carry—low cost comprehensive general liability insurance coverage against accidental bodily injuries to patrons and property damage stemming from persons using the preserve.

Since shooting preserves represent a relatively new category for underwriters, and there are no long standing statistics on which to calculate risks, policy pre-

(Continued on Next Page)

Pen-raised game being released on a paid shooting preserve ahead of hunter's guns. Many birds escape to adjacent land areas and become wild, legal game during the regular hunting season.

(Continued from Preceding Page)

miums are computed in ratio to gross receipts of a preserve for any stated 12-month period. The premium rate is 75¢ per $100 of gross receipts, as declared by a preserve's operator, with a minimum premium in all cases of $50 per year. The really fair part of the deal is that the operator himself sets each annual gross operating receipts figure and is billed for the corresponding premium. For those readers who prefer specific figures, an operator who estimates his gross business at $15,000 per year would pay a premium of $112.00.

But should his estimated gross revenue for a stated 12-month period not be realized, or should it be exceeded, an adjustment downward or upward in the advance-paid premium is made by the insurance company.

It is a contract of mutual faith. The insurance underwriters pledge to charge a single basic rate to all preserve operators and each operator, in turn, is pledged to keep equal faith by carrying protection comparable to his true gross receipts. . . .

Very popular in Florida's neighboring states are those shooting preserves that charge a minimum daily hunting fee, for which a designated number of birds are allowed. Extra kills are paid for on a per capita basis known to the hunter before he walks afield. Should he fail to connect with any of the provided targets —due to his own poor marksmanship—he doesn't get a refund, however!

Therefore, many patrons of the poor shot class like the pay-only-for-what-you-kill fee system, also successfully used and under which kill cost per bird usually figures a little higher than the minimum daily fee system.

Generally, each pen-raised pheasant released and killed will cost a hunter $4.00 to $8.00; each quail, $1.50 to $2.00. Charges vary, according to facilities and services offered.

The need for shooting preserves as supplements to already existing good game management practices, is graphically described by Dr. J. P. Linduska, director of the wildlife management division of the Remington Arms Company. Dr. Linduska points out that "in 1900 we were a nation with a population of 76 million well scattered souls, with lots of elbow room. At the last national census in 1950 things were a little cozier. With a count of 154 million, there were two of us where we had been only one before. So, even with the same amount of wild game, it would divide up to only half as much. But that isn't even good! We don't have as much game as formerly, and the number of hunters afield have increased at a greater rate than the population as a whole. In just a 17-year period, from 1933 to 1950, our combined sales of hunting and fishing licenses nearly tripled—from 10 to 28 million!

"Our forebears started out in this country with some 560 million acres of potential crop land. By 1934, 300 million acres — more than half — of this total had suffered from erosion, surveys disclosed. Of our total tillable acreage, one-fifth has been ruined for productive agriculture and wild game propagation, experts say.

"Wildlife, remember, is a product of the soil, just like corn, wheat, dairy cows and beef. The more fertile the soil, the more of everything it will produce, including wildlife. The great bulk of our small game is produced and harvested on brush and forest land acreage of privately-owned farms, so we can look to private land management for past answers and future trends in small game management. The record's not good but the future looks brighter."

Obviously, remaining wildlife acreage must be encouraged to provide maximum game production, subject to logical and controlled harvesting of a percentage of each annual crop. This is as true of Florida as elsewhere.

But let likeable Charley Dickey, southeastern field representative of the Sportsmen's Service Bureau, New York, tell you more about shooting preserves, what they are and how they operate. Dickey is an authority on the subject, but neither Dickey nor his employers, a non-profit trade association sponsored as a public service by the arms and am-

munition manufacturers, have any financial interest in already operating, or proposed, preserves—only in helping get new ones soundly established and in furnishing prospective operators with unbiased facts relative to existing preserves, new enterprise requirements and costs. Dickey says:

"Shooting preserves are privately-owned and operated preserves where pen-raised game is released for hunting, usually upon payment of a fee by the shooters. The term 'shooting preserve' implies in most instances that there is an extended season, no bag limit on released game, and that the areas are licensed or sanctioned by state game commissions. Nearly two-thirds of the states now have shooting preserves open to the public.

"Ringneck pheasants are by far the most popular game released. Mallards are second and quail are third. Chukar partridge rank fourth.

"The paying customers are the ones who determine how much sport a shooting preserve must provide. If the customers demand tough wing shooting, and are willing to pay for the best, the operator will give it to them. If the hunters want easy field walking, birds stocked close to trails, and all open shooting, the operator will cooperate. Most shooting preserve operators go in business to make a living, rather than as a side line operation; they are willing to supply the type of hunting sportsmen demand.

"Privately operated, paid shooting preserves help game commissions by providing areas where licensed hunting can be enjoyed six months of each year. Total license revenue is increased, as many persons who would not otherwise hunt purchase the licenses necessary to hunt on a preserve. Also, having the private preserves open to public hunting on a fee basis relieves the pressure on state and national wild game management areas during the regular hunting season. Many persons with limited time to hunt would rather hunt within a paid preserve, with assurance of getting shots at game, than take their chances in open country.

A shooting preserve can be operated in a farming area close to population centers and makes hunting possible where no wild game or hunting privileges are to be found at present.

"Preserve laws or regulations must be written so that they are fair to the operators, to the state game commissions who must administer the laws and, by all means, to the sportsmen in general.

"Any doubt as to whether or not a state should have shooting preserves stems primarily from the fear that wild game — which belongs to the public, and which is managed by the state — will be shot inadvertently by hunters using the paid preserves.

"Admittedly, a few wild birds may be shot on preserves; these areas are operated by humans who are subject to error the same as in any other enterprise. It is up to the state to see that many, many more released, pen-raised birds escape from the area than wild ones are shot. Quite often the ratio figures out as a trade of ten to twenty pen-raised birds escaping for every wild bird taken inadvertently.

"When a minimum seasonal release of birds is required of all operators, there is insurance that a sufficient number of birds will escape from the area, and at the same time the owner of property next to an existing preserve cannot license his own grounds and get a 'free ride' at the expense of all. Faced with a state game commission requirement of releasing, say, a minimum of 100 pheasants a year—an investment of several hundred dollars, counting pen cost—an illegitimately inclined operator will think twice before attempting to commercialize the game overflow from an adjoining preserve. A minimum seasonal release of 100 birds of each species hunted is a far more satisfactory way of protecting the public's rights than high preserve-operating license fees.

"Further, in most states having licensed shooting preserves it is customary to impose a recovery percentage on pen-raised birds released. New York State, for example, allows only 80 per cent of the total number of pheasants released to be recovered. This means that for every five ringnecks stocked, one must go free to surrounding farms as wild game. Most operators are happy to recover 70 per cent of released birds, especially if their preserves are open to the average hunter. New operators often recover less than 60 per cent the first year. Birds flying outside the boundaries of licensed shooting preserves become wild game, subject to regular hunting season dates and state game laws.

"Percentage of recovery is guar-

(Continued on Page 34)

Animal Connoisseurs

BY ROSS PHARES

The remarkable means the animals use to earn their meals, and eat them are of endless variety.

IF YOU KNOW the eating habits of animals you know their greatest worth or evil. We prosper or famish according to them. Life in the wilds is a battle of the appetite—of strange needs, tastes, and eccentricities.

Many animals live on a restricted diet. The beaver thrives on a ration of sawdust and pulp—of his own making. The lakes and canals he builds to transport and preserve his food (and his building materials), changes the landscape and the way of life for his neighbors. The beaver cuts logs into two to six feet lengths, anchors them, usually in mud or with rocks, under water. In winter when he needs food he swims to his anchor pile, selects a log, returns to the lodge, and there eats the bark off with a corn-on-the-cob technique.

The termite also lives on a diet of wood. Though it may chew your house down, while it pours a steady stream of sawdust down its gullet, its stomach can no more digest wood than yours. It depends upon outside—or rather inside—help to digest its meals, just as if it possessed a pasture of cows in its stomach grazing on pulp. Microscopic parasites in its alimentary tract digest cellulose for its nourishment.

The boll weevil has about as narrow a diet as any creature—from birth to death it's immature bolls of cotton and nothing else. But no more determined eater exists. Assaulted year in and year out by thousands of entomologists, and professional and amateur exterminators, it yet eats distressingly well — from the farmer's point of view.

Many creatures with a wide range of tastes often concentrate on one choice dish. Once a honey bee gets its taste whetted on one type of flower, it may not visit any other during that particular blooming period.

A lion possibly could exist on almost any kind of meat and enjoy much of it. But the big hunter is a reckless connoisseur. The most palate tickling morsel for him seemingly is a burro steak. And ironically the burro is one of the most vicious fighters known. (This animal fights lying on its back utilizing four lightning fast hoofs, and a biting mouth for defense.) Though there are many animals on his range much easier to overhaul, a lion will repeatedly risk getting his brains knocked out trying to bag a burro.

The coyote can, and does—when he can't do any better—eat practically anything. But when there's a lengthy menu before him he is as discriminating as all get out about delicacies. This finicky connoisseur touches nothing second rate when the best is available. John Hearn of the Texas Game and Fish Commission said of his taste and talents: "The coyote is able to pick out the best melons in the patch without even having to thump them."

Hunger seems to recognize no size. The size of a creature is no indication of the bulk of the prey it will attack. Certain spiders eat small birds, mice, lizards, and frogs. Some creatures seemingly do the impossible by overcoming shortcomings: The spider unable to fly to catch a bird, or outrun or outfight a mouse, snares them in webs. And without adequate teeth or mouth for chewing and swallowing such game, it dines by sucking the juices from it.

On the other hand the big mouth hunters take advantage of their eating apparatus to do the apparently impossible. Bull frogs have been known to swallow ducks. And the Colorado toad eats rats. It can not outhop or outfight a rat—it squirts a poison on its prey and renders it helpless. The king snake, it is claimed, can swallow a snake as large as itself. The snake becomes a big mouth by virtue of a hinged jaw that permits enormous entries. Unlike the toothless frog and toad, the snake has teeth—but not a one for chewing purposes. It bolts all food whole, head first.

We frequently misjudge the appetites of animals. All of them are not constantly seeking and eating food. The three square meals a day concept is strictly a man conceived idea. A hearty meal twice a year apparently is all the boa snake desires or needs (according to zoo observers). Even insects are not always

gluttons. The bedbug which has the reputation of always being hungry with a vengeance has been known to go a year without food. One confined in a bottle for this period seemed none the worse for its fast when released. Just what the capacity of animals to endure without food or on a restricted diet is, in general, unknown. There is the classic example of Old Rip, the horned frog that lived encased in the cornerstone of the courthouse at Eastland, Texas, for thirty-one years. Some creatures never eat, even once in a lifetime. The luna moth, sometimes called the queen of the night, is one of the most beautiful known. But her reign is a lifetime fast. She dies in a few days never having tasted food.

There seems no end of variations to animals' appetites and eating habits. Many of them must eat regularly, or almost constantly—or perish. The chipmunk is a hearty eater. His house in the fall is a virtual larder. He stores food under his bed. In the early winter he sleeps high, up near the ceiling. By spring he's almost to the floor.

The gila monster possesses one of the most extraordinary larders. In his habitat bumper "crops" are followed by famine. So in good times he figuratively eats his head off to fatten his tail (his head grows smaller comparatively). The tail is his larder. When he's living high his tail enlarges to abnormal proportions, and when slim pickings come he's hauling his feed bag right behind him. He can live well for months without food by drawing on the reserve fat in his tail.

But some creatures seem always in need of meals. Possibly no factor of eating habits so affect the balance of nature as the amount of food consumed by the various species. Most birds eat at least half of their weight in food every day. Without these ravenous appetites, it isn't difficult to imagine what the insect pest problem might be. Fledglings often consume more than their own weight in a day.

And many mammals can put away enormous quantities. A wolf at a single meal often eats a fifth of its body weight. A moose on the browse will on a good day send forty or fifty pounds down the hatch. A bat will eat half of its weight during a single evening of feeding. One would think a shrew would eat itself to death. This animal has been known to eat three times its weight every twenty-four hours day after day. The mole may be the champion eater in his league. It daily consumes food equal to its own weight. But it has a strange, ironic habit—though its own weight in food normally is sufficient to sustain it, if it is forced to eat unsuitable food it may eat up to four times its weight. The worse the food the more it eats.

Liquid refreshments often come harder for the animals than solid food. A flying squirrel may consume three ounces of water in a night—equivalent to two gallons for a man. Thus its range is greatly determined by water facilities. The brown rat, besides being a big eater, is also a heavy drinker. He'll do almost any devilish thing to get a drink. He'll even gnaw through a lead pipe.

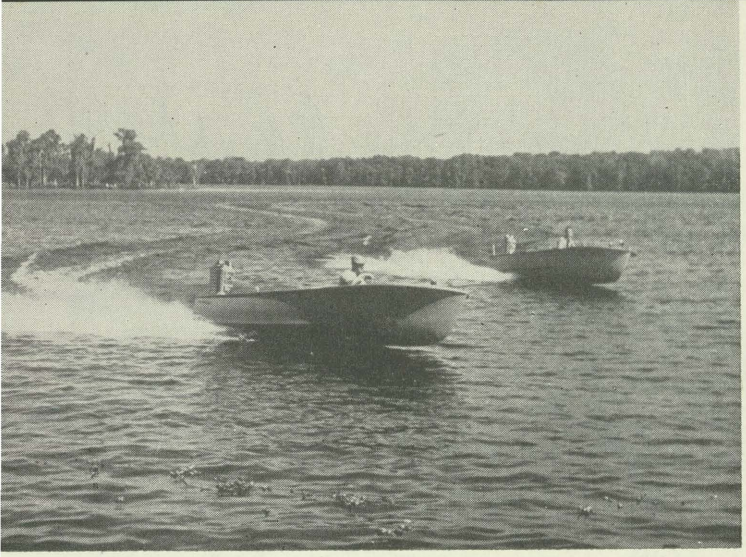
But the animals show great adaptability in water consumption. Some have to take what they can get—which must have taken a lot of adjusting through the centuries. Many sea birds drink salt water. Some have become so accustomed to it that fresh water disagrees with them. The varying hare may never taste water. It slacks its thirst by drinking dew in summer and eating snow in winter. Many other crea-

(Continued on Page 42)

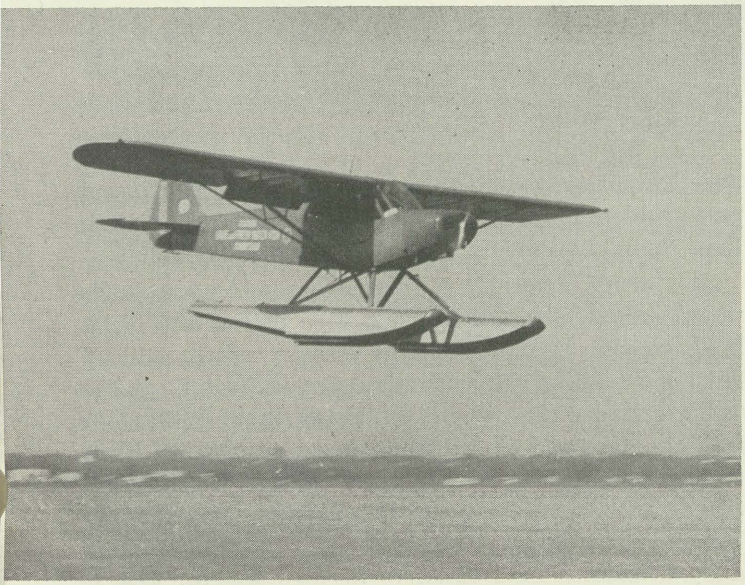
For the Florida Wildlife Officer
a great variety of activities are

ALL IN A DAY'S WORK

PHOTOS BY JAKE JOHNSON

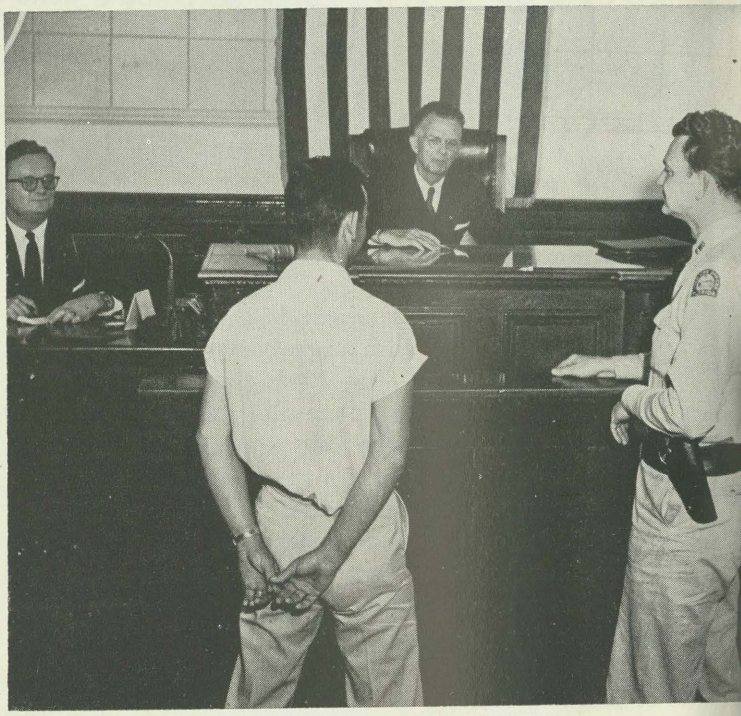


A thorough understanding of the operation and maintenance of both inboard and outboard powered craft is an important part of the knowledge required of a Wildlife Officer.



Some special officers pilot airplanes, working a ground to air spotting system when on patrol.

In some of the back country, the Wildlife Officer may be required to conduct his patrol work on horseback.



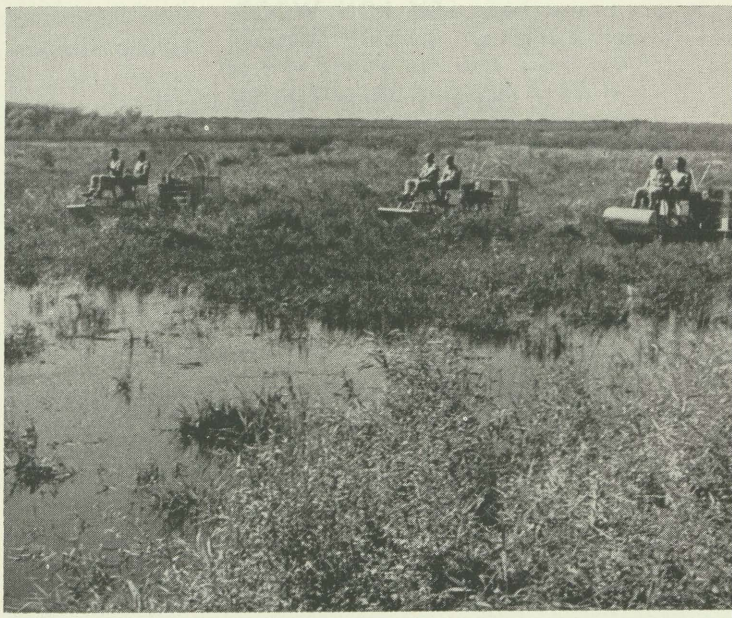
The Wildlife Officer must know thoroughly the game laws and regulations and have a good knowledge of arrest and court procedures.

Many times he is called upon to help locate lost outboard motors and other equipment and to aid in the search for drowning victims.

He must be well informed on fish management practices for he is sometimes requested to give a hand to the fisheries technicians.

Motor vehicles, equipped with radio communication systems, require him to have a working knowledge of communications procedures.

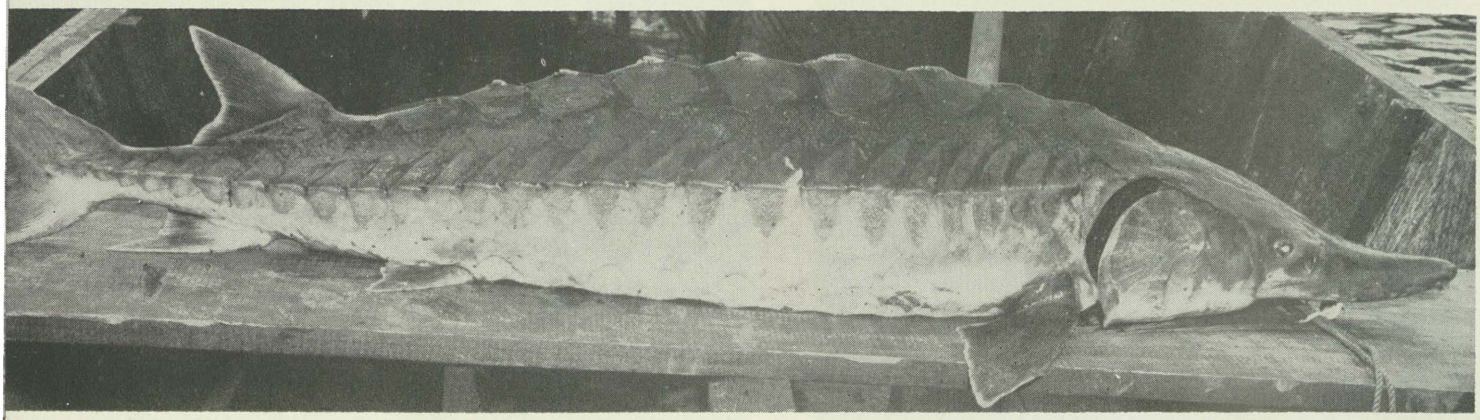
The Wildlife Officer must have a thorough knowledge of proper arrest and equipment confiscation methods and processes.



In some parts of the state where terrain favors the use of airboats, the Wildlife Officer must be able to operate these speedy craft.

At any time, the Wildlife Officer may be called upon to aid in rescue work and to lend a helping hand in disaster areas.

He must strive to maintain friendly and cooperative relations with the people in his community and throughout his patrol district.



The sturgeon is a left-over from ancient times and looks the part. Note the heavy ganoid plates that run longitudinally down the body. Just above the rope may be seen some of the barbels, sensory organs with which the sturgeon locates food.

FLORIDA'S SENIOR CITIZENS

BY LOU WOOD

Florida's senior citizens boast an ancestry of over 200,000,000 years.

Hugging the sand, the horseshoe crab keeps the edge of his curved shell slightly buried. This anchors him slightly and sudden strong waves cannot topple him over. Once on his back he is helpless unless he can dig that formidable but harmless spike tail into the sand and flip himself back. He is one of the oldest, unchanged forms of life on the earth.

Among Florida's vast galaxy of wildlife, fishes and marine creatures there are several organisms holding membership in the exclusive society known as Living Fossils. Conditions for membership are very strict. The organism must be a member of a race of animals that in former times was widespread and had numerous species but today is confined to one or two species and occupies restricted areas of the globe. In other words, a living fossil is an animal that by all rights should be extinct, but ain't.

Florida's living fossils have one thing in common—water. All of them represent that stage in evolution before life emerged from the ponds and slimes to become terrestial. In the metamorphasis of the frog as it changes from gill-breathing tadpole to four-legged land animal we can see a condensation of the millions of years of evolution that some forms of aquatic life endured before becoming terrestial.

During Devonian times, an era beginning 260,000,000 BC, rainfall was extremely seasonal throughout eastern North America and Western Europe. Fishes and other aquatic life went through 40,000,000 years of seasonal drought. Time and again those creatures that could live by gulping air instead of being solely dependent upon their gills were the ones that survived.

Those same creatures that survived Devonian droughts are able to live through the current low water period in Florida. In ponds and streams where the water has become a thick gruel, angler's prizes have suffocated while the living fossils, the garfish and bowfin, have survived now as then because of their ability to gulp air directly. Of the two fish, usually considered rough fish by sportsmen, the bowfin or mudfish is the best example of a living fossil for only one species of this fish is left upon the earth.

Gars and bowfins belong to the order *Rhombogan-oidea,* which is only a way of saying that their scales are rhombic in shape (a rectangle pushed out of plumb) and ganoid in structure. The ganoid scale con-

sist of an inner layer of bone covered by an outer layer of enamel. This makes a pretty tough hide. On large alligator gars the scales can even turn an axe. This heavy armor has been quite an aid in the amazing survival of these fishes. It not only protects the fish from attack but it also prevents excessive drying out and is difficult for external parasites to invade.

Air bladders of the gar and bowfin show a trend towards the evolution of the lung. Tiny capillaries surround the air bladder and can absorb oxygen through the bladder wall in the same manner as oxygen is absorbed through the delicate membrane of the human lung.

There are several other characteristics of the *Rhomboganoida* that point to their antiquity. They have tail skeletons like the shark (another very old fish but ineligible for living fossil society because there are too many species and too widespread). The boney skull is devoid of scales as in modern fishes. In the gar there is no lateral line, a fact that doesn't mean much to the average angler but has great significane to biologists as many of their measurements are made from the lateral line.

Another of the ancient fishes, and one that the average Floridian does not realize exists in the state's waters is the sturgeon of caviar fame. As a matter of fact, sturgeon fishing is quite a lively business from the middle of March to the latter part of May or first of June in the rivers of the panhandle Gulf Coast. One dealer in Apalachicola ships about 10,000 pounds of sturgeon each year to the New York market.

This is one of the anadromous fishes that is born in fresh water and returns to fresh water to spawn. If it were not for this habit of reproduction we would probably not know the sturgeon still existed in Florida for those who fish for the sturgeon do not know to what area of the sea the sturgeon goes after spawning.

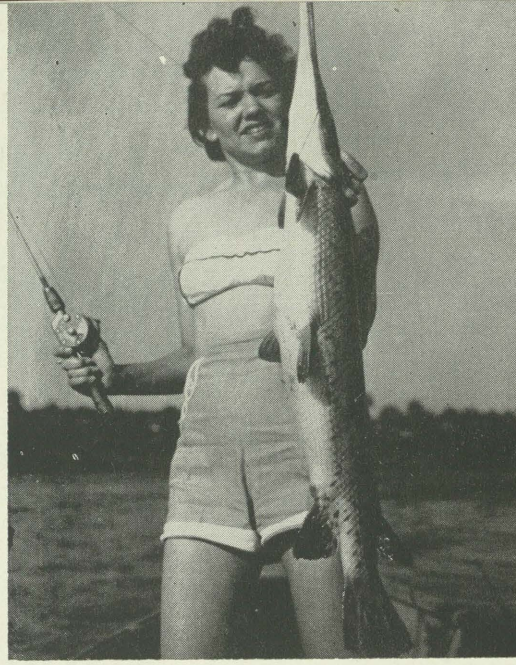
The sturgeon is a bottom feeder, taking its food in a very peculiar manner. Toward the front of the snout on the lower surface are four barbels like those surrounding the mouth of the catfish. When these barbels strike something on the bottom that feels like food, a tubular mouth located some distance behind the barbel is immediately projected and by the time the tube is fully extended it is right over the morsel located by the barbels. Meanwhile, the fish has never slacked its pace in swimming.

Because of its feeding habits the sturgeon is not taken on hook and line but by nets. A ten inch mesh net is used so only sturgeon, very large gars, and a few turtles are caught. Along the Ochlockonee River a couple of generations back sturgeon were so numerous during their spawning run that they were caught by snatch hooks. All that was long ago, however, and both the size and number of fish caught has declined considerably. Fish weighing several hundred pounds and eight to ten feet in length are still landed ocassionally but the average catch is much less, usually well under a hundred pounds.

Like the gar and bowfin, the sturgeon also has a ganoid covering, bone overlaid with enamel. The entire body is not covered and the ganoid plates, rather than scales, are arranged in five longitudinal rows. One runs down the back, one on each side, and one on each side of the belly. Altogether the sturgeon with its tubular mouth, long snout, shark-like tail, and prominent ridge plates looks just as pre-historic as it is.

Moving in slow spurts over the sandy shallows of Florida's long coastline, the horseshoe crab continues an existence that has been unchanged through the millions of years it took for the world as we know it to form. Horseshoe crabs, differing so slightly from the present animal that only an expert can detect the variations, were moving through the shallows long before any kind of life, plant or animal, was able to live out of water.

Zoologists still quibble about where to put *Limulus Polyphemus*



The garfish, another of Florida's living fossils sports pre-historic scales unlike those of modern spiny rayed fishes. The scales are actually bone overlaid with hard enamel and can turn an axe. Like the bowfin, the gar is able to breathe by gulping air and can survive in stagnant, muddy waters where other fishes suffocate.

or horseshoe crab in their neat order of things. They agree, however, that he is not a crab but the only living species of a once widespread family. Most often he is placed with the spiders and scorpions for he is closest to these.

It seems strange that this form of life should remain unchanged during the whole evolution of man. Perhaps *Limulus* remains the same because his structure is so well suited to the life he leads and certainly this suitability has been important in his tenacious grasp upon this earth.

To appreciate the fine mechanism of *Limulus,* find one of these little marine tanks and flip him over. There are seven pairs of appendages that work constantly in a rhythmic flow of movement. The first two are innocuous pincers that grasp food particles and shove them backward between the first pair of the five pairs of legs. The legs push the food into the mouth that lies between the pairs and in the process the food is broken up by broad grinding surfaces at the base of each leg. In other words, the horseshoe crab chews as it walks and must walk to

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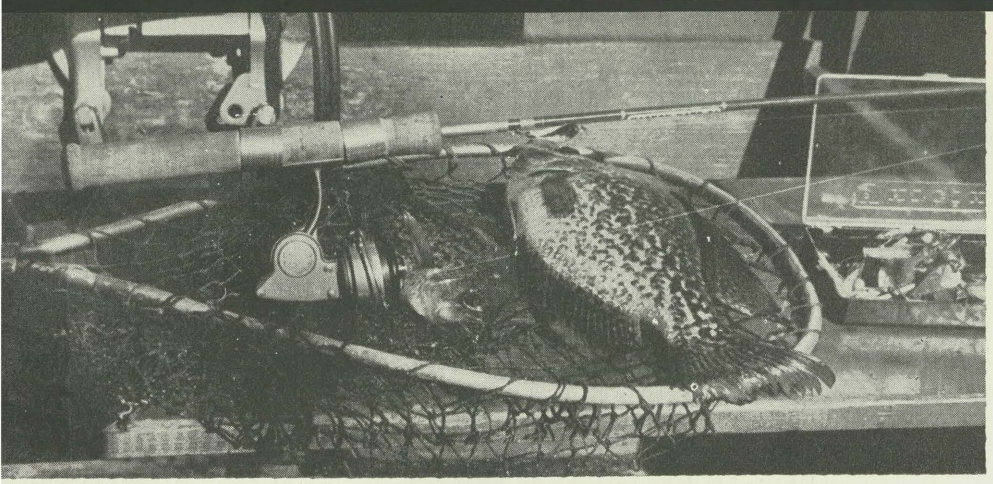


On the author's ultra-light spinning rig, a speckled perch of this size gives an excellent account of himself.

SPINNING ULTRA LIGHT

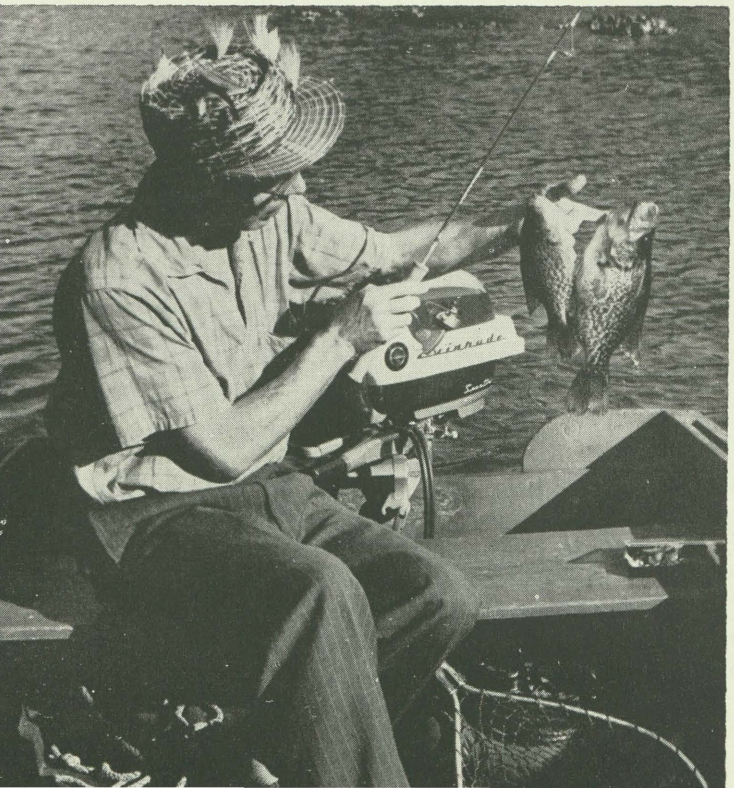
BY RAY OVINGTON

. . . . as if spinning tackle itself was not enough to produce the ultimate in light tackle fishing, the ultra light gear goes one dramatic step further.

IF YOU HAPPENED to be shad fishing on the St. John's River this past spring the same days I was, you saw the lightest spinning rig that has been devised by man. You saw it hook and land four pound shad by the dozen, not easily but with much effort on the part of this angler. That was the kind of effort that delights a fisherman. The smashing strike of a shad is hardly felt with the bigger spinning outfits and much less by the stiff bait casting rigs. The first run of an enraged shad is a veritable whirlwind when handled at the butt end of a 3½ foot glass rod, similar to the first tip top joint of the average spinning rod. When played from the tiny reel with its spool hardly the size of a twenty-five cent piece that is holding a plentiful reserve of two pound test line . . . the shad fun and action really stops the show. More than once those days, anglers got a big kick, a dozen laughs and their generous portion of amazement when they saw first hand the new rig I was using. Not only did it kill shad effectively, but it was obvious that not only the actor in the scene but the audience was having their fill. I could have sold two dozen rods and reels that day if I could have had them aboard.

The moral to the story, if there is necessity for one, is that fresh water fishing regardless of the species is essentially for fun as well as for the freezer. More and more in the future when both native and out of state anglers realize that fishing is more for sport, rigs of this sort will appear on the scene, not because you catch less fish with them, but because it is twice as much fun.

So the next step in light tackle has arrived. First was spinning itself, a strict departure from the ageless norm of standard tackle. Anglers had discovered that light tackle did as well or better in supplying the laughs and the thrills, years before, but this new milestone was to set the pace of the future. Like the miniature camera craze, spinning has taken over the waterways of Florida, and for that matter North America in a steady grassfire since its introduction from Europe many years ago. The ultra light spinning tackle seems to be the end of the trail, until some now unknown



Feather weight spinning tackle yields the full measure of sport from even modest-sized panfish.

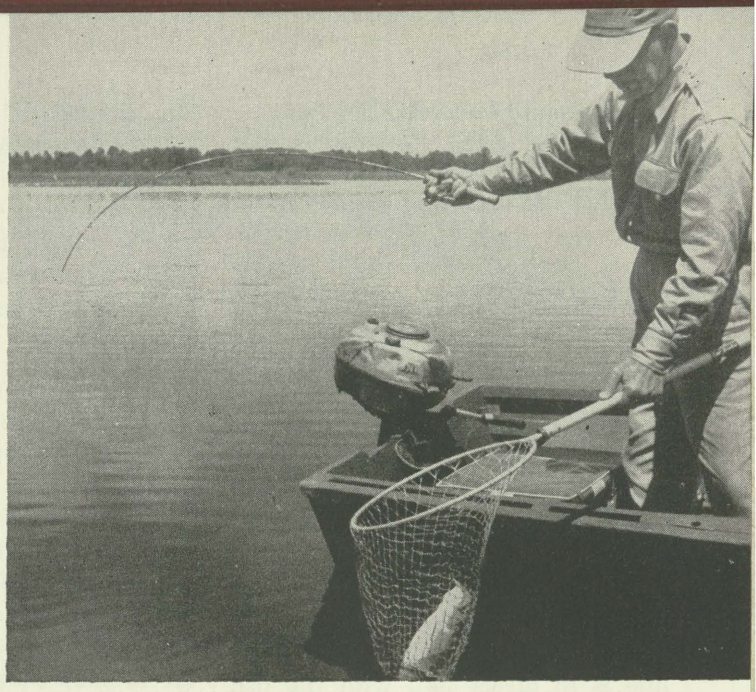
departure in fishing enters the scene. What with atom power and suchlike, who knows just what the brains will come up with next!

So, we have ultra light spinning tackle. What about it? What does ultra light mean and how can it best be used?

Ultra light spinning tackle is designed primarily for sport and fun with the little fish, or the smaller pounders of the larger species. Actually that covers a lot of territory. Atlantic salmon fishermen of the fly rod have landed 40 pounders on leaders testing but four pounds. Spin fishermen have taken white marlin of the 100 pound class on ten pound test line with spinning tackle, so you can see that the range of the ultra light when properly set up will take, say on a line testing two pounds, bass of 10 pounds, shad of four and five, snook, school tarpon, trout, jacks, mackerel, blues, and don't forget our summer pal of the lakes, the fierce little chain pickerel, fast becoming one of our state's finest game fish.

But, ultra light, like any other tackle, must be set up properly and used well to be effective for anything other than profanity at lost fish. Beginning at the terminal end, you can not hoist a five pound fish over the gunwale with two pound line. Neither can you lift out a whirligig of a two pound fish on two pound line. Two pound line tests at two pounds dead weight or up to two pounds, shock pull . . . and less after a knot is tied. So you use a net to land your fish, a safety precaution for any type of tackle, as the fish can throw a hook at boatside no matter what line is tied to it. With ultra light tackle, an extra precaution would be the use of a trace, or tippet leader of heavier poundage test barrelknotted so that it will not break easily or hold back the smooth flow of line during the cast. Naturally a plastic covered wire leader of the short dimensions will suffice at the junction with the lure. These come equipped with snap-on swivels. With all this, care must be taken not to keep too tight a line on the fish as it is being brought to the boat for fear that the fish will make a last dash at freedom (a favorite get-away ace-in-the-hole of our friend the pickerel).

To use spinning tackle light or ultra light, a knowledge of monofilament line is essential, for when you understand this product, your fishing techniques will be changed and clarified. Playtl is the most pliable of the monos that this angler has found. A mono line to be good must be pliable, it must have sufficient stretchability. Playtl has all this, plus uniform strength. Now, given this bit of meat to work on we find by constant observation that the longer line from the rod tip to the fish, the greater stretch is possible, evolving the greatest amount of cushion to the gyrations of the fish. The shorter the line, that is the closer the fish comes in to the rod tip, the less stretch-ability is present. So, play the fish out as much as possible before bringing it in close to the boat. Remember that the nearer home plate, the greater the danger of line breakage.



On the bantam weight outfit, a 3½ foot glass rod and a tiny reel filled with two pound test line, the scrappy shad turns in a show stopping performance.

Your reel has several ways of helping you with further margin against breakage. Number one is the adjustable drag mechanism which allows the spool to feed out line when needed without the usual bait casting reel whirring knuckle-busting handle. With the drag set lighter and lighter as the fish comes in, the slightest pull on the line should release enough cushion to save the fish from tearing loose. Set the reel in anti-reverse (that is with the drag free to work and the handle locked stationary). Even if you do not choose to use the anti-reverse, (in this case your partner will be netting the fish leaving both of your hands free to operate your tackle), the drag will free the needed line while you crank in against the pull of the fish.

A major point to remember about ultra light spinning gear, or standard spinning gear on large fish, is that the stretch in the line, the mechanism of the reel work in harmony to give you the utmost in satisfaction and safety with the fish. But like any tackle, and this includes the biggest big game hoists that are used on the world's record marlin, all tackle has its limit. As you go light, your margin of error must also tighten up. These points will help you to hold on to that fish that you outwitted. Set your drag light before the fish strikes, especially when using a lure that is moving (remembering that the hit to a moving lure will exert twice as much pressure as it would have had the lure been sitting still). When bobber fishing, however, use a tighter drag, for the bobber will help to absorb the first smash of a big one and a strong setting pull back on the rod is generally required to sink that barb. After the first run, release the drag a bit and when you get the feel of the fish or view its size you can determine your drag setting, not forgetting to ease it up as the fish gets

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close to the boat. Remember that there is no need to horse the fish and that the light line has one other advantage—that of extreme length. There is virtually no small or medium sized fish that will ever take all the reserve line off a spinning reel. The more line he takes, the more fun you'll have! (Sure, it might take longer to get the fish in, but what's the hurry!)

Your rod, of course, is the great factor in cushioning the antics of the fish. Remember, though, that this cushion has its limitations just like the line. When that rod has been bent to its fullest extent, the line is in direct pull with the fish and something has got to give. If the drag has been set to below this pulling point you are safe on third and the comforting sound of the drag will let you smile! Try always to hold your rod as high as possible above your head to keep as much of the line out of the water and snags. Water drag on the line is additional ounces on an already close margin (if the fish is relatively big for the tackle) and the statue of liberty pose is not out of order.

Like any precision equipment, spinning tackle and especially ultra light gear requires precision operation including the terminal tackle already mentioned plus the exactness of the knots. It is I hope, common knowledge that plain old square knots are out the window. The barrel knot is the only one to use when joining two lengths of line together (the trace or heavy leader to the main line). The twist knot rather than the knurle or any other should be employed when tying onto a swivel or hook. These will not bind the nylon and do offer less strain on the pound test in the clinches. Hooks must be as sharp as a doctor's needle for easier and surer setting of the hook.

A few don'ts are in order for you who would have more fun with spinning tackle, heavy, standard or ultra light. Don't try to throw too heavy a lure on too light a line or you'll snap the line or might even seriously weaken the rod tip. Don't use too heavy a line on any reel. (The ultra light reel such as the one pictured, the *Mignon* should never carry line heavier than three pounds.) The average standard fresh water reel will not operate with line heavier than eight or possibly ten (in playtl) pounds because the stiffer line does not uncoil properly on the cast. For trolling only, you can load up one spool with heavier line but change to the lighter one if you plan to cast. Don't overload the spool, especially when using a heavy line for it will tend to uncoil on cast too fast and thus birdsnest at the first guide. A trick here is in order. When buying a new mono line, load it on the spool with an even tension and then walk it out to the end and tie it to a tree. Stretch it a bit to make it more supple and you are ready to fish.

Tiny lures go with the ultra light tackle and as any expert bass fisherman will tell you, a lot of whoppers have been taken on small lures. You'll be surprised at how far and how accurately you can cast these penny weights and how deadly they can be under certain conditions. There are countless varieties of spoons and spinners with their variations to be used with feathered hooks and bait. Then too, all you fellows who like to fish with live minnows will find that ultra light spinning gear such as the rig pictured will cast an inch and a half minnow a hundred feet or so without any danger of killing it or snapping it off.

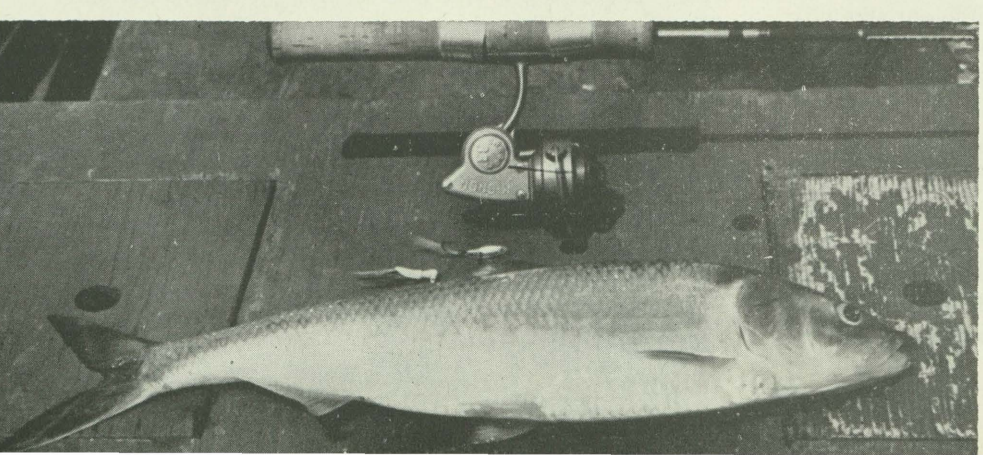
Remember that fishing is for fun and the lighter you can go, the heavier the portion of enjoyment per cast for you, and especially the family members who wish also to enjoy your favorite sport with you. Hand 'em a spinning rig and in five minutes they'll be in the battle of fun with you. The ultra light gear is kid size to start with, but the giants it will kill will amaze you.

Just recently I was fishing the surf with my ultra light outfit at Daytona Beach and a gathering clan of fellow surfers were giving me the Florida version of the Bronx cheer, that is until they saw me hoist from the surf several gamey whiting, six bluefish, a four pound jack cravelle. They didn't laugh the day at Beacon 42 when I boated ten out of ten trout (all of them over the six pound mark, taken on artificials) using the same (old by now) two pound test line I had used during the early experiments on the St. Johns.

I know it might look a little silly to see a man fishing the surf with two pound line. It looks and is silly to take a one pound whiting or a half pound speck with the rope you use on the dog.

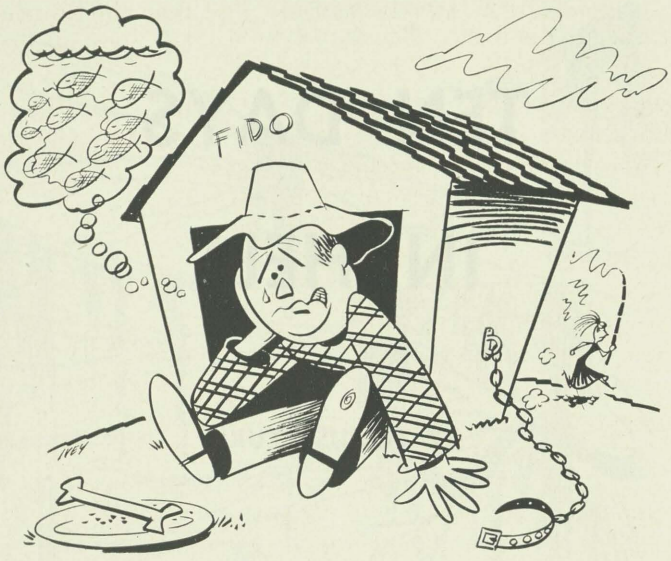
The fringe benefits of freshwater spinning such as miniature bobber fishing, bass plug fishing and the like will be covered in a future article, but today go get yourself an ultra light spinning rig and see just what I'm talking about. Oil it well, be careful tying the knots and get to know that drag mechanism as well as you do your wife and the second marriage in the family will be complete. ●

Combination for top sport — a streamlined, power-packed American shad and the ultra-light spinning outfit.



AJAX, FLORIDA

BY PLATO WINDER



Dear Mister Editor:

Anybody who has lived as long as I have ought to know better than to predict anything, even that his mother loves him. Much less anything that has to do with fishing. For there is a divine law that begins to operate in opposition to you the moment you become foolhardy enough to say that such and such is so. This law seems to want to make a liar out of you. Probably the idea behind it is to make a man careful.

Let a man be led to say, "I am going to work for the Humdinger Co. on Monday next," and the upshot of it will be that Mr. Humdinger will die or the business change hands or some other calamity will happen to it so that your friend doesn't get his job. Haven't you found it that way, Mister Editor?

Of course, I had a good reason for spouting off about fishing; having fished with Ernie Lyons of Stuart who is what is known as a precision fisherman. Ernie figures out how many fish he needs, goes out and gets them, tells his wife to have the grease hot and that he will be in at 12:00 noon sharp with the necessary number of fish. She does as she is told (when it suits her) and Ernie comes walking in at noon with the fish all cleaned and ready for the skillet. Just before getting into the trouble I am about to describe I had been with Ernie on one of his Saturday morning fishing expeditions. He counted noses before leaving home and said aloud, "You can eat four, I can eat four, your wife can eat one, my wife can eat two and the cook can eat three; that will make fourteen fish; let's go!" So we went and we caught fourteen fish, wound in our lines, cleaned the fish and arrived at Ernie's at 12:00 noon. At one we were seated at the table.

I point to this experience as reason enough for my becoming careless in taking things for granted and even, in fact, promising. And you can imagine what happened . . .

It was a pretty day, the wind was right, my boat paddler was willing and anxious; even my wife decided she'd like to go with us. So we went. The wife took a seat in the shade of a covered boat landing and the paddler and I got into the boat. We were fishing in a friend's private pond and soon he came down to the pond and chatted with the wife. She had caught several nice bream by then so she said, "We'll stop in on the way home and share these with you." 'Twasn't long before the cook came along tending three of my friend's grandchildren. By this time the wife had several more so she said, "When we get through here I'll stop by and share some of these fish with you. Tell your mother there'll be enough for everybody's supper." The cook spoke up: "Does that mean me?" "That means you, too," says the wife hauling in another bream. In all she caught 25 nice big baldheaded bream.

Meanwhile, I had been casting my head off along the shoreline and the only thing I had to decorate my stringer was one small bass and he was mostly head. I was keeping him for bait, so to speak, hoping my luck would change and I would be able to put him back by displacing him with a larger one. But nothing like this happened.

Finally, I had to give up so we paddled to the boathouse and asked about the wife's string of fish. She had the prettiest string of bream I had ever seen come out of this pond. And right here is where I made my mistake. I said to her, "I'll just add mine to your string," (I had caught another small bass) and with that I started to haul in her stringer. I managed to add my two fish to the lot and then it happened. Somehow I let the stringer slip out of my hand and the whole stringer, lined with beautiful bream like martins on a gourd-roost, started moving through the water. What to do?

One look at my wife and I knew I had played hob. Stopping only to take off my spectacles I plunged into the lake, clothes, watch, pocketbook with driver's license and all the other important documents a man thinks he needs, and everything else. I got one tiny touch of the line as it slippd out of reach and I never saw or felt it again. After searching a minute or two I emerged, climbed up on the boat house and sat down to calculate the damage done. My wife was already winding in her line around the pole and her grim look told me there was no use my saying anything. But of course I began to explain, meanwhile taking out my watch and pocketbook and spreading things out on the floor of the boathouse to dry. And it was

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TEN DAYS IN HELL

For years people have speculated on how Tate's Hell got its name. Here our author gives you his ideas.

BY JULIUS STURM

TATE WAS A YOUNG MAN — tall and slender, with coiled-spring muscles and black hair—what people would call handsome. He eked out a difficult living on his small Franklin County farm. He hadn't yet married and brought a wife to this out-of-the-way part of Florida, but he'd been thinking about it. It was something for the future, after the little farm was firmly established.

It was a good farm even if it was small. His herd of cattle numbered eight, including an old bull, four cows, of which three had recently calved, and one which was due soon.

His principal worry was the swamp that backed his land. No one had ever been into it, at least not very far. For as far as one could see it was a wilderness of snake-infested grass, water, muck, and dead and rotting cypress stumps festooned with gray moss. To describe it as "forbidding" would be to praise it. The land wasn't good for anything and the water near the outer edge was too shallow for much fishing. It was just a big, ugly blot on the countenance of Franklin County.

Out of that tangle of primitive chaos panthers came with alarming frequency to prey on the livestock of the small nearby farms. At night gators could be heard barking in its fastnesses and, when the wind was right, blankets of mosquitoes descended on the countryside.

No fence separated Tate's property from those endless miles of quagmire. Of course cattle—even cattle—would have more sense than to stray from the solid ground of the pasture—but, then, who can tell what cattle will do? He couldn't afford to lose his cattle; neither could he afford to string wire across the back part of his land. So, as time went on, he merely worried about it.

It had been hot all day—that day when, late in the afternoon, he went to the pasture to drive the cattle into the crude corral for the night. But the herd was not waiting in its accustomed place and, as he passed close to the edge of the swamp, he could see clearly the hoofprints leading into the water. Scanning the wilderness he could make out his entire herd *fully a mile into the swamp*!

Leaving the cattle there was out of the question, so he set off boldly on foot. Every few steps he had to detour cautiously around a moccasin. In thirty minutes he had succeeded in covering only a quarter of a mile, and he could see the cattle ahead, grazing steadily away from him.

On he hurried, still keeping a sharp lookout for moccasins. As he approached closer to the herd, he hollered at them, but the sound of his voice, echoing among the cypress stumps, seemed to frighten them and they moved away more quickly than he could follow.

He was in water now, knee-deep water, and didn't have to worry so much about snakes, but he kept his eye peeled for a possible gator. He'd never actually seen one, but he knew they were here.

The cattle moved away from him steadily, and he seemed unable to close the gap separating him from the herd.

The sun dropped behind the line of tree and mosquitoes descended on him in a cloud. On he trudged in the gathering gloom, past the ghostly forms of tall, dead cypress trees, the stumps of their long-vanished branches heavily hung with moss.

The light was falling rapidly now, and he realized for the first time that it would be impossible for him to go any further in the darkness — *or to go back*! Quickly he found a log that was well out of the water and, after poking all around it carefully to be sure there were no snakes near it, he climbed out of the water and sat swatting the clouds of attacking mosquitoes.

All night he stayed on the log, chilled to the bone and fighting the insects with both hands, slowly going out of his mind as the din of their singing became an incessant roar.

"My God!" he cried aloud, not once but dozens of times during that sleepless night, "Let them stop singing—*please*—let them stop singing—*just for a minute!*"

By morning his chill had become numbness from the clouds of mist that, all night, had drifted silently over him like animated, formless spirits on their way to

a ghostly conclave. But his own spirits rose as the brightening morning sun drove the mosquitoes into hiding.

He stretched stiffly, as soon as it was light enough to see clearly, and started to climb down the low end of the log into the water, but stopped suddenly!

On the very edge of the log, where it entered the water, lay a moccasin, coiled and deadly, watching his every move with unblinking eyes. Another few inches and he would have stepped into the center of those coils!

Carefully he edged back up the log and lowered himself into the water from the high end. All thought of his cattle had now vanished from his mind. His benumbed brain told him only that he was lost. He couldn't remember from which direction he had come, nor did he know where he was going as he trudged forward.

All day he staggered and stumbled on through the water which became waist deep in places. Twice he saw panthers eyeing him from the tangled chaos of small, dry ferns, and once during the afternoon he saw an eight-foot alligator slide noisily into the water a hundred feet to his right. This gave added impetus to his flight, and he kept a careful watch behind. All about him, during the day, he saw the silent dark forms of moccasins, swimming in the water or lying silently, watchfully, in the sun.

He tried to forget how hungry he was. Finally he could bear his thirst no longer and forced himself to drink some of the black, brackish water through which he was traveling.

By nightfall he was in a panic of desperation. Climbing onto a log, he prepared to spend another night. He dare not sleep lest some creature attack him. But sleep was out of the question anyway, for with the setting sun the mosquitoes returned to the attack, and he spent a second night that was a carbon copy of the first.

Next day he staggered on, barely able to stay on his feet, and spent a repetituous third night on a log. Days and nights chased one another in a nightmarish succession of mosquitoes, moccasins, panthers, gators, hot swamp water, unbearable hunger, and a creeping nausea he had developed from drinking the crawling, brackish water. He had to have water to go on, and he dare not stop if he hoped to escape this primaeval trap into which his own folly had thrust him.

Ten days after Tate first stepped into the swamp another farmer trudged along the path leading from the main road to his farm near Carrabelle. He was surprised to meet an incredibly old man who approached him slowly. His hair was bleached and disheveled; his skin, cracked, wrinkled, and leathery. His body, bent and wasted, could not have weighed over seventy pounds. His clothes were in rags, and he seemed barely able to place one foot in front of the other.

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QUAIL RESTOCKING—PLUS OR MINUS

RESTOCKING WITH QUAIL has at some time played an important role in the policies of almost every state game department. It has always been a colorful and popular public relations program requested by sportsmen and demanded by political groups. Today it is largely abandoned as a sound quail management tool, although there is still considerable demand for "turning birds loose." After years of attempting to restore bird populations in this manner most states discovered it to be a costly means of producing only negative results.

Birds used for restocking purposes have come from several sources, foremost of which has been state game farms producing pen-reared birds. Mexico was another source until an embargo was placed on quail, prohibiting their importation into this country. Wild trapped birds have been widely used in Florida but the actual contribution toward increasing quail populations of even this excellent stock is questionable under normal circumstances.

Restocking with pen-reared birds has proven to be a costly and almost negative way of putting a bird in front of the sportsman's gun. Evidence of this has been gained from studies conducted by many states. The study methods consisted primarily of banding the birds released and obtaining returns of the bands from hunters during the hunting season. This gave some indication of survival after release. Results of some of the studies were compiled by Buechner.

("An Evaluation of Restocking With Pen-reared Bobwhite", Journal of Wildlife Management, Vol. 14, 1950) and are presented in the following table:

STATE	Number Birds Released	Number Bands Returned	Per Cent Return of Birds Banded
Oklahoma	140,062	1,668	1.19
Pennsylvania	12,420	76	.61
Indiana	6,098	183	3.0
Missouri	366	3	.82
Total	158,946	1,930	1.21

We can see from these figures that the survival of pen-reared birds after release is very low. They are unable to adjust themselves to a wild existence.

Robert A. Pierce ("Survival of Pen Reared Quail", Kentucky Division of Fish and Game FA. Annual Report. Proj. 6-R, 1948) found in Kentucky that 72 per cent of his birds released disappeared from his study area within two months after release, and that 92 per cent disappeared within five months.

The economics involved are quite startling. States report costs of from $0.68 to $3.00 per bird released. Suppose it costs a state $0.70 per bird to rear and release them. If only 1.21 per cent of them are killed by hunters, the cost of every released bird shot jumps to $57.85. Perhaps this figure could be reduced somewhat if consideration is also taken of the invariably few offspring of the released quail. Even with the most generous allowances for such offspring and non-return of bands, this remains costly shooting, and since the sportsman is paying the bill, it is an unfair and unjust expenditure of his money.

The more we learn regarding quail populations, the more we realize that most restocking is unnecessary and unjustified. Almost without exception, if a range is carrying a low number of quail it is deficient in food or cover. It has a low carrying capacity. This means that it will support only the existing low number of birds regardless of the number that might be added, assuming that nothing is done to increase the carrying capacity.

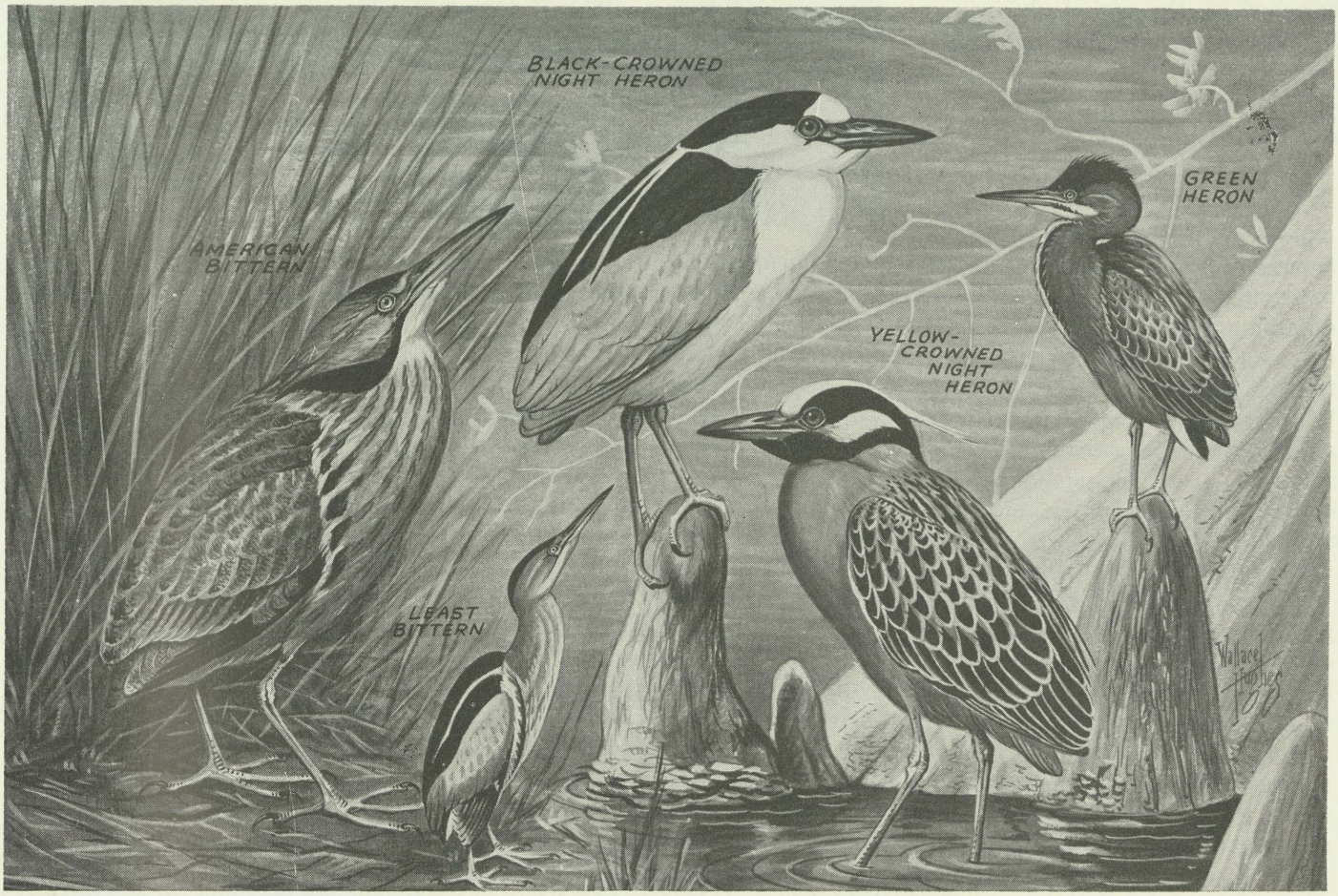
If the range is improved by the addition of food and cover, the bird population will increase through natural production. Seldom in Florida is a quail range understocked. Even when subjected to catastrophic weather conditions, the population builds back to the carrying capacity rapidly. In the majority of cases when birds are released, even if they are native wild trapped birds, the range is then overstocked. A surplus results, and according to the laws of population dynamics, this surplus is going to be rapidly removed through predation and natural mortality until the population is in balance with the carrying capacity. So, nothing is accomplished in the end.

In certain areas of the state annual restocking with wild trapped birds has been the practice for years. Where such birds can be obtained at relatively little cost and are released in areas open to the public and subject to extremely heavy hunting pressure such releases may serve as insurance and are of some public relations value. Such restocking has the possibility of being worthwhile and is most applicable principally in the open flatwoods areas of south Florida where a much heavier kill is possible then in those areas with brushy thickets or dense woods and where the drive method of quail trapping can be employed effectively.

We often find that the man who is most vociferous in his demands for restocking is the man who has ruined the carrying capacity of his land for quail and awakens to the fact that his birds are gone. Perhaps he put his land in beautiful improved pastures and removed the last bit of natural food and cover. To place birds in such surroundings and expect them to remain is pure folly. No cattleman can expect to produce more pounds of beef on a fully stocked range by adding more cows unless he first increases the carrying capacity of that range. Quail populations function the same way.

In light of the foregoing discussion, it is felt that restocking is largely if not entirely unnecessary in Florida. It is a very impractical and ineffective means of attempting to increase quail populations. ●

FLORIDA BIRDLIFE—Herons and Bitterns



Eastern Green Heron, *Butorides virescens virescens.*

Measuring from 15 to 22 inches in total length, this is one of the smallest of the state's herons. The adult has a blackish-green head crest, reddish head and neck, greenish back, and orange yellow legs. Immature birds are grayish brown on the back, with heavy streakings of brown on head and breast.

Crayfish, as well as grasshoppers and other insects are commonly eaten by this heron, although killifish, silversides, gobies and other small fishes comprise the greatest part of the diet.

The species nests throughout the state. During mid-winter it is much less common in north Florida than it is during other times of the year.

Black-crowned Night Heron, *Nycticorax nycticorax hoactli.*

The stocky body form and the predominantly black, gray and white color pattern identify the adult black-crowned night heron. The young are grayish brown in color and heavily marked with white spots.

Active mainly during the hours of darkness, the birds spend the day resting quietly in favored tree roosts. Occasionally they may be active during the day, especially when the sky is overcast.

This is a common species throughout the state except in the Keys where it is not often encountered.

Yellow-crowned Night Heron, *Nyctanassa violacea violacea.*

The strongly patterned black and white head markings and the characteristic back markings readily identify the adult of this species. The immature birds are tannish with much white speckling on head and back and with prominent brownish bars on the undersurface.

This bird is much more commonly active during the day than is the black-crowned night heron. Single birds or groups of three or four individuals are more likely to be encountered than any sizeable gathering.

Known throughout Florida, the yellow-crown is more common from the central part of the state southward.

American Bittern, *Botaurus lentiginosus.*

The rich brown, heavily-streaked body pattern and the black stripe on the side of the neck are good field identification marks for this species.

Not at all uncommon about the boggy marshes in all sections of the state, the American bittern nevertheless is not as widely known as many other more conspicuously colored birds. The subdued coloration plus the retiring habits of the

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bittern make the species easily overlooked by the casual observer.

Eastern Least Bittern, *Ixobrychus exilis exilis.*

The smallest of the heron tribe, the least bittern measures from 11 to 14 inches from tip of bill to end of tail. The mature male is glossy greenish-black on the back, with a distinct white line down the sides. The female is dark purplish brown on the back with a tannish back line.

This little bird is a most unobtrusive dweller of the marshlands throughout the entire state.

Minnows, snails, frogs, insects, and various crustaceans compose the main food items of the species. ●

PUT SIX — TAKE FIVE

(Continued from Page 19)

anteed by the issuance of tags by the state game commissions. Instead of issuing a tag for each bird bought or raised by a preserve operator, tags for only 80 per cent are issued. Killed birds are tagged before they are removed from shooting preserves and each game commission has, of course, authority of premises' inspection and can take a bird count at any time.

"In addition to these prescribed protections, the public has still another safeguard. An operator may have from $10,000 to $50,000 invested in a preserve. If he violates the regulations, he could have his license revoked and automatically be put out of business. With the investment required to get started, shooting preserve operators take care to tread the straight and narrow.

"Shooting preserves are bound to grow, and the future will see three types of preserves—private grounds; preserves catering to the strictly sporting shooter who is willing to pay a little more for extra services and top hunting, and preserves catering to the middle income bracket. These pay-as-you-go enterprises will not solve all our game problems, but they do provide the answers to the questions of where good hunting can be had; of extended seasons; of additional places to train dogs; no bag limits except those imposed by pocketbooks, and, in most cases, new and different kinds of birds to shoot."

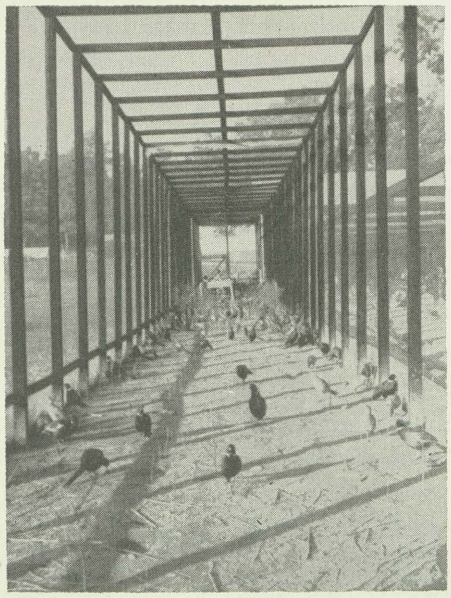
Not everyone can set up and operate a successful shooting preserve.

First, persons contemplating the step must necessarily have an inherent liking for people, dogs and hunting to make a success of the enterprise.

Second, sufficient finances to buy or lease needed land, erect pens and buildings, purchase basic game stock, pay for state operating licenses, carry adequate insurance and purchase good hunting dogs must be available.

An ideal preserve is one between 300 and 500 acres; better a small tract with dense ground cover in strips and small plots than a large, unsuited timbered tract. During idle seasons, many farmlands naturally furnish needed weed patches and fence-row growth, and these can be supplemented with plantings of cheap sorghum. There *must* be suitable cover for released game if a preserve is to be successful.

An operator must closely adhere to such recognized good game management practices as are necessary to promote natural environment conducive to keeping a fair percentage of released birds within preserve boundaries, and as required for creation of natural hunting conditions for the taking of flushed game.



The secret of making put-and-take shooting truly natural is to first condition pen-raised birds in long exercising pens, to give them long flight habits comparable to their wild cousins, and then to release them in suitable cover.

Good hunting dogs, furnished as part of the daily hunting fee, or as extras, are essential. They not only attract the patronage of hunters who prefer to hunt with dogs, but save the preserve operator from the financial loss of birds downed but not recovered.

In all, opening and operating a shooting preserve represents a sizeable financial investment and associated responsibilities but, like any business, the enterprise can be both profitable and popular, properly managed.

To save prospective operators from making costly mistakes, the Sportsmen's Service Bureau, 250 East 43rd Street, New York 17, or its southeastern representative, Charley Dickey, RD #2, Box 316-D, Greenwood, South Carolina, will gladly furnish facts and figures on preserve operations and provide helpful guidance, no charge. Game Commission members, game breeders and other technicians are ready to help, too; all realize the problems created by an increasing number of hunters afield and just so much land now open to hunting.

In essence and fact, a new type of hunting is coming to the South. It's bird hunting—especially exciting pheasant hunting—on a six-months-a-year season and on a no bag limit basis!

To the discouraged hunter who has vainly sought nearby places on which to hunt, or who has had to compete simultaneously with thousands of other hunters for the available game in public State Management areas, Florida's future shooting preserves are going to be something like the Indian's dreamed-of Happy Hunting Grounds — only they'll be on this side of the Divide. ●

COTTONTAIL RABBIT, by Elizabeth and Charles Schwartz. 46 pages, extensively illustrated with colored pencil drawings by Charles Schwartz. Published by Holiday House, 8 West 13th Street, New York 11, N. Y. Price $2.50 (library binding).

One of the Holiday House Life-Cycle books, Cottontail Rabbit is an exceptionally well written and beautifully illustrated book on this common and popular wildlife species. Printed in large type, with clear, detailed illustrations in color on nearly every page, the story is directed toward readers of the 3-4 grade level with interest level of grades 1 through 6.

There is no wild animal that a child wishes so much to cuddle as the shy rabbit. It is one of the most preyed-upon of mammals, and its only defense is to run or hide.

In this story we see where the cottontail rabbit flees and hides. Through an eventful year we observe its ways intimately. We watch it feed, play, mate, make nests, bear young, nurse them, and elude its enemies or finally become food for some other animal. A vegetarian itself, the cottontail is an important link in the "food chain" of the wildlife community.

The story is narrated with clarity, tact, and mounting interest by two field scientists who are the parents of young children ready for this very kind of book.

Elizabeth and Charles Schwartz are staff biologists with the Missouri Conservation Commission.

Behind this book is an impressive scientific study of the cottontail rabbit. A highly interesting and impressive story for grade school youngsters.

WILDLIFE CAMERAMAN, by Jim Kjelgaard. 218 pages. Published by Holiday House, 8 West 13th Street, New York 11, N. Y. Price $2.75

This is another of Jim Kjelgaard's excellent outdoor adventure books for boys. Young Jase Mason, with a burning ambition to become a really good outdoor photographer, decides to find out whether or not he has the ability required to make a success of this demanding occupation.

He spends a summer in the wilderness with his dog and his cameras. It turned out to be a summer filled with adventure. Living close to nature, boy and dog both learned a great deal about wilderness dwellers, from rabbits to bears and moose. They also became unexpectedly involved with game wardens and poachers. Through it all, Jase stubbornly stuck to his ambition to become a wildlife cameraman.

This is an exciting story with a lively background of authentic photographic and conservation information.

Excellent reading for the young outdoorsman.

A PERFECT BOOKE FOR KEEPING SPARHAWKS OR GOSHAWKES, by J. E. Harting. 85 pages. Published by Charles T. Branford Company, 551 Boylston Street, Boston 16, Mass. Price $5.00

A PERFECT BOOKE was written about 1575, when hawking was a fine art. It first appeared in book form in 1883 in a limited edition of 100 copies. The original is a very scarce item. The present edition is limited to 500 copies.

In the foreword, Professor Robert M. Stabler of Colorado College says; "There is no falconer who looks through the offerings of booksellers and antiquarians who does not yearn for some ancient falconry treatise which, because of its rarity, is beyond his means. Many of these items are gems of falconry lore, packed with information which was considered essential to the education of the falconer and the training and flying of his bird. That no really modern treatise on hawking can hold a candle to most of the older works makes the latter even more valuable as sources of information on the art."

The gradual growth of falconry interest in the United States, coupled with the impetus given by the U. S. Air Academy in the choosing of the falcon as its official mascot, is creating a demand for factual information on the sport which must be met.

Steps in this direction have been taken, as witness the recent reprinting by Charles T. Branford Company of Dr. Casey A. Wood's and Marjorie Fyfe's translation of Frederick II's "The Art of Falconry."

The reprinting of A PERFECT BOOKE FOR KEPINGE OF SPARHAWKES OR GOSHAWKES represents another excellent choice in this reissuing of unavailable treatises. This little work is especially topical because of its treatment of the shortwinged hawks, the Sparrowhawk and the Goshawk. The former is not to be confused with the misnamed American Sparrow hawk, which is actually a Kestrel. As European Goshawks are being acquired in increasing numbers by American falconers, hints on their proper training will be most welcome.

That A PERFECT BOOKE is a fortunate choice here is further indicated by the fact that it was deemed worthy of reprinting in its entirety in 1886 by J. E. Harting. Aside from being a bibliphile (Harting was at one time librarian to Linnean Society of London), he was an expert falconer in his own right and published numerous works dealing with the art. ●

FISHING

By CHUCK SCHILLING

DON CULLIMORE, formerly of Johnson Motors, is now beating the drums for Gator Boat Trailers. These boat trailers are manufactured in Florida by the Peterson brothers, which brings me to this story.

A few months ago, Frank Peterson and I had just launched my boat and were preparing to crank up when another car, towing a boat on a Gator Trailer, pulled up to the launching ramp. The trailer was a new model, exactly like my own. Frank, in a pleased tone, said "Let's wait around a bit and watch him launch his boat."

The newcomer backed around and took dead aim at the water. He started backing down the ramp and never stopped until the entire trailer was in the water. The taillight must have been at least 10 inches under. The boat had floated off the rear cradle, and now the owner unhooked the bow and, pulling and tugging like a steam engine, manhandled the boat the rest of the way off the trailer. As he pulled the dripping trailer from the water, Peterson, who had, meanwhile, sat in stunned and unbelieving silence, said, "Please, let's go back in. I want to talk to him."

In a voice intended to sound hearty and friendly, Frank called, "I see you've got one of those new trailers. How do you like it?"

Our friend answered, "It sure is a dandy. I like it fine—best trailer I've ever owned."

In a carefully controlled voice, Frank said, "I hear you don't even have to get those new models' wheels wet when you launch or load your boat."

In a cheerful voice, our friend said, "Oh, I think there's something like that, but I always just back it in the water."

Over the sound of grinding teeth, Frank said, "There's a lot of salt in this water. Aren't you afraid it'll ruin your wheel bearings and rust the whole outfit?"

Free as the wind came the answer —"Oh, I suppose so, but what the heck—it'll last a year or so, and then it'll be time to get a new one."

We departed from there. Frank's day was ruined, and I suffered with him. Here was a guy who had paid out good money for a boat trailer that is the last word in efficient, easy, dry operation. He didn't even read the directions—just backed it in the water. How does a manufacturer cope with this problem?

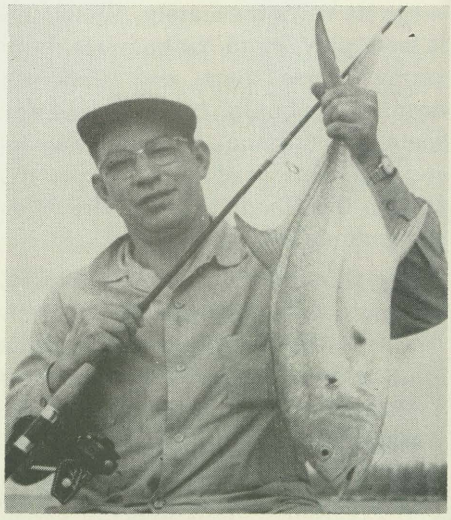
A few weeks later, I was at Mt. Dora, Florida, attending a meeting of the Florida Outdoor Writers' Assn. Charles Waterman, Fishing Editor of FLORIDA OUTDOORS Magazine, his wife, and my wife and I, were starting out on an early morning fishing trip and to swap a few editorial lies. As we drove onto the ramp, we noticed there was a boat in the process of being launched by our good friend and fellow outdoor writer, Don Cullimore. Both Waterman and myself use Gator Trailers, and we have read the literature written by Cullimore, many times. We sensed a bit of fun.

Reciting from memory, we went thru the Instruction Manual to see if its author was following his own advice—tires just touching the edge of the water?—tilt joint unlocked? —boat plugs in?—cradle lock released?—tie bars and bow cord removed? After a quick check, Cullimore prepared to launch the boat. We yelled, "Stop! According to your own book, a 12-year-old girl can launch a big boat without strain. How about it?"

Cullimore (dead pan) said, "I always carry a 12-year-old girl with me just to launch my boat."

At this, his daughter Sharon, aged 12, walked over to the bow of the boat and gave it a gentle push with one hand. The boat rolled back, the trailer tilted, and the boat continued to launch itself completely unassisted. We were convinced. Cullimore's boat is a 16-ft. Feather-Craft weighing about 500 pounds. He has two 18-horse Johnsons on the transom and, as usual, an icebox, soft drinks, safety equipment, and fishing tackle on board.

Many of the newer boat trailers are marvels of mechanical efficiency. To get the best from them, they have to be precisely adjusted to your



John Younkin with a 12-lb. jack crevalle. That's the St. Lucie jetty in the background. We stayed around to catch many more fine fish. Would you have left?

own particular boat. If everything is just right, with the weight load properly distributed and the point of balance well placed, launching and loading your boat without the trailer ever getting wet is as easy as falling off a log. A 12-year-old girl can do it.

Which reminds me of a story about the draw span at the old Jensen Beach Fishing Bridge crossing the Indian River. This draw span was the manually operating kind, and its manufacturers promised that a 12-year-old boy could operate it after it was installed.

The bridge was finally completed and the draw span ready for use. This span opened when push bars were placed in a gear in the center of the span with the operator walking the bars 'round and 'round. It was some job. It took two men to get it moving. Hoping to get some adjustment, the bridge commission asked the draw manufacturers about their advertising claims. A short time later, a representative of the draw company appeared with a 12-year-old boy who, singlehandedly, worked the draw. You should have seen this 12-year-old. He was about 6 feet tall and weighed close to 200 pounds. He was all muscle. I've often wondered what happened to him. If he'd kept on growing all thru his teens, he'd have made the Cardiff Giant look like a midget.

HIT AND RUN

People in groups pick up odd habits of behavior. Hot shot drivers hold up car roofs with their left hands (this to prove they can drive one handedly). TV viewers need to munch on snacks to really enjoy their television programs. Dog owners often take a tone of voice, when addressing their pets, reminiscent of a Prussian general snapping a reprimand at a disrespectful junior lieutenant.

Many fishermen have a habit of catching a fish and then getting away from there. This is particularly true of the tourist and tyro, but the expert is far from immune. I have watched this phenomenon at work so many times, I've come to expect it. Quite often, I watch an angler in another boat catch a fish and crank up the motor almost before the lure is out of the fish's mouth. I suppose this stems from a subconscious feeling that the water, having yielded a prize, is unlikely to give another.

I had a perfect example of this just recently. John Younkin of Miami and I were fishing the St. Lucie Inlet near Stuart, Florida. From force of habit, I had cut the motor to drift past the end of the jetty on the ocean side of the inlet. We were casting spinning lures. The first drift produced a couple of 3-lb. bluefish. We ran up wind and repeated, taking another blue and a good pompano.

Looking seaward, we could see at least 25 boats milling around from spot to spot. We didn't see any of them catching anything. We continued to run up wind and drift past the end of the jetty, taking good fish all the while. We caught another pompano, a couple of channel bass, and all the blues we wanted for our immediate needs.

As the boats from Stuart came out, they would notice us fishing in the inlet and slow down long enough to try their luck. There were plenty of fish, so they would usually catch one right away. As soon as they had boated their prize, they would crank up and go away to join the milling throng a mile or so offshore. All but one, that is.

Ralph Ulmer, an old-timer from Stuart, came along and joined John and me in our drift fishing. Ralph stayed right there to make a fine catch. As John and I were preparing to leave, I ran over to Ulmer's boat and called, "Hey—aren't you going to go out there with all those other boats?"

Ralph, looking surprised, said, "What for?"

"Well," I said, "There must be a lot of fish out there, or all those boats wouldn't be milling around."

Ralph said, "Are you nuts? There are lots of fish right here."

I said, "You're not going?"

Ralph said, "No—not while these fish are here."

What can you do with a guy like that? ●

FLY CASTING

(Continued from Page 13)

is; a whale of a lot of fun and a sometimes deadly method of racking up a bragging sized string of bass, bluegills, crappies and other fresh water, light tackle battlers.

The fundamentals are simple but important. Get the feel of your outfit, follow the basic principles outlined on these pages and go to it. The idea is to get your fly, popping bug, or other suitable lure out there to the fish. You will develop your own peculiarities of style as you go along. The "experts" whoop and chuckle derisively? So what! If you catch fish and have fun, isn't that what you are out there for? I, for one, say let the Fancy Dan, perfect form affectionados take their picturesque antics and go elsewhere. I have some fly fishing to do. ●

AJAX, FLORIDA

(Continued from Page 29)

then I learned the extent of the damage done. There were three skillets waiting for those bream and in each house the skillet was surrounded by hungry potential fish and hush puppy eaters. My friend, the pond's owner, had gotten up an appetite, so had his wife, so had the daughter and her husband, so had the three children, so had the cook and so had the paddler and his family. And naturally I had expected a few fish for myself.

Mister Editor, you never saw a glummer lot as we drove from house to house explaining how I had ruined everybody's supper. And from the expression on my wife's face I knew I'd never be given a chance to forget the incident.

One little grandchild who had just gotten a new puppy for her birthday, said to me as I drove away, "Uncle Plato, did you see my new doghouse?" And I said to her the only thing I could say to anybody, "Could you lend it to me for a week or two?" Nobody laughed.

Respectfully,
Plato Winder, Storekeeper

SENIOR CITIZENS

(Continued from Page 25)

chew.

The five pairs of legs are not used so much for locomotion as for keeping the animal's body off the ground. Forward motion comes from the remaining pair of appendages that are shaped on the same principle as ski poles. They are pointed on the end to secure good footing but have a flange at the top of the point that keeps them from sticking too far into the sand.

In spite of the formidable looking armor and spiney tail, the horseshoe crab is completely harmless. It offers so much shell for so little meat that it is not among the desirable foods of other marine creatures. As the animal grows it sheds its dingy armor and acquires a larger shell. Empty shell cases, intact except for a thin slit along the front curve, are familiar among the debris that collects at the edge of the sea.

Another puzzler for zoologists is the distribution of *Limulus*. He is found along the Atlantic and Gulf coasts and among the Spice Islands of the Indian Ocean. A person can spend many a sleepless night wondering how a creature that cannot actually swim and one unable to cross the great depths of the ocean floor managed to get from one side of the earth to the other. Sometime during the history of the world Limulus managed the journey.

There are several other animals of antiquity that may be eligible for the living fossil society. The manatee or sea cow, once abundant in Florida's warm rivers and springs, is one of two remaining species in the family Sirenia. A third species, the Stella sea cow of the Pacific has become extinct during recent history. The other remaining species is the dugong of the eastern tropics.

These mammals, who give birth to live young and nurse them while floating in a somewhat sitting position holding the suckling young in their front flippers, are usually credited with starting all the tales about mermaids. Considering the shapely descriptions of mermaids and the unshapely bulk of five hundred pounds of manatee, one must conclude that our forefathers enjoyed lively imaginations. However, beauties of the day depicted by Renaissance artists during the age of great explorations indicate that tastes in feminine pulchritude once ran to more generous proportions than contemporary standards.

"WOW! I don't care if I never catch another fish."

Manatees surviving in Florida outside of zoos and exhibits are found in the remote and uninhabited bayous of the southermost mainland. This is one of the rarest of marine animals.

The o'possum seems a likely candidate for the society of living fossils as the only marsupial of North America. But a check around the globe to Australia shows that there are many mammals which give birth to embryo young and transfer them to their pouches for further growth. Also, the possum manages to maintain goodly numbers despite its enemies—our own caniverous animals and the automobile.

One factor about Florida's living fossils that seems a little strange is that these animals of pre-history should exist in a place geologists consider one of the youngest of the world's land area. Or perhaps that is the answer. Perhaps in its youngness Florida more closely resembles the general conditions of the world when today's living fossils were numerous and were the dominant animals of the earth. ●

TACKLE TIPS

(Continued from Page 11)

type of lures for the simple reason that a fish comes to the top to strike. The flurry of water as a fish breaks the surface after the bug gives added punch to the sport.

The retrieve should be varied when fishing with poppers. Sometimes it is best to cast, let the bug rest for a half minute or more, then slowly raise the rod to twitch the lure slightly. Let it rest a few moments more then twitch it again.

At other times it seems that a more rapid retrieve brings the payoff. Alternately pop the bug with a sharp up-lift of the rod, then bring in a couple of feet of line and pop it again.

The same general method applies to working other artificials. Vary your method and speed of retrieve until you find just the right combination.

Whether you decide to invest a hundred dollars in your first fly rod outfit or make up your mind to hold the cost down to twenty dollars or less there is a world of fishing pleasure awaiting you. Florida's abundant lakes and streams hold plenty of promise for the fly-rod angler. ●

MEET YOUR COMMISSION

WILLIAM SHERWOOD DURKEE

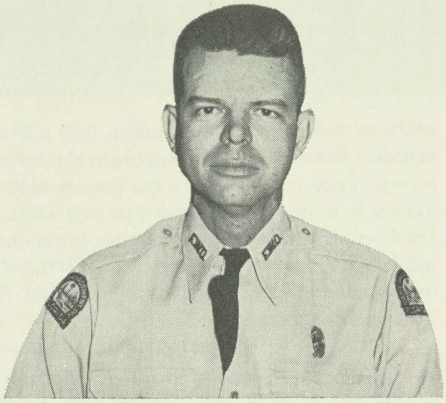
Aviation Division

Employed as a Flying Wildlife Officer for the Central Florida Region on December 24, 1954, Bill Durkee was recently named Chief of the Game Commission's newly organized Aviation Division.

Born in Canastota, New York, Bill has been active in the aviation field since 1935. He spent 16 years in commercial aviation and during World War II acted as an instructor and functional test pilot for the U.S. Air Force.

His special training includes aircraft, flight, maintenance, radio and personnel. He is a graduate of A.S.T.C. Syracuse University.

Bill and his wife, the former Virginia Cazenovia, live in Ocala. He is an active member of the American Legion and belongs to the Aircraft Owners' and Pilots Association.



DAVID E. SWINDELL, JR.

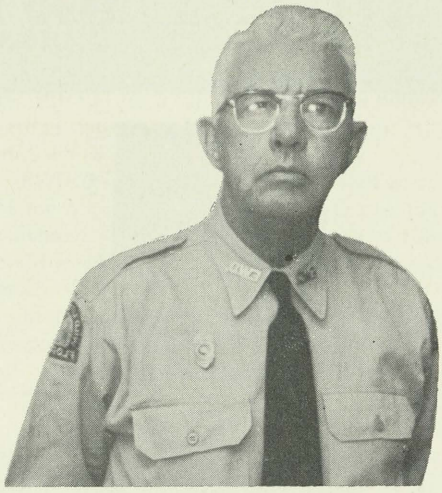
Administration

Dave Swindell was employed as a biologist for the Game and Fresh Water Fish Commission on January 10, 1948. A graduate of the University of Florida where he received his Masters Degree in Biology, Dave served as Regional Manager for the Central Region until his present appointment as Special Liaison Officer for the Game Management and Administrative Divisions.

A veteran of World War II, during which he served three years as a forward observer in the European Theatre, Dave was discharged with the rank of First Lieutenant.

He is married to the former Betty Tomlinson of Ocala. They have one son, David III, age 6, and make their home at Perry in Taylor County.

An ardent gun collector, Dave holds membership in the Wildlife Society and the Florida Peace Officers Association.



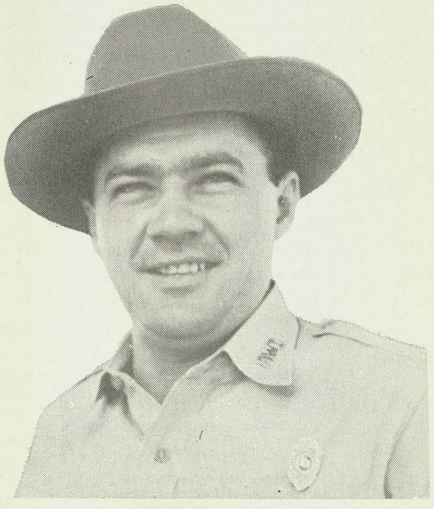
THOMAS J. BOZEMAN

South Florida Region

Wildlife Officer Tom Bozeman has been employed by the Game and Fresh Water Fish Commission since November 15, 1948. He came to the Commission as an experienced officer having served his home town of Lake Placid as Deputy Sheriff, Constable, City Councilman and Mayor.

Born in Calhoun County, Tom is married to the former Mamie Carter of Omega, Georgia, and has lived in Lake Placid, his present area of service, since 1927. They have six children, James, 38; Earl, 35; Tom, Jr., 29; Howard, 24; Norman, 22, and Nancy, 10.

In addition to holding every city government position in the town of Lake Placid, Tom is an active member of the Baptist Church, Masonic Lodge, Lions Club, W.O.W. and the Highlands Fish and Game Club. As a hobby, he hunts out old cemeteries and markers.



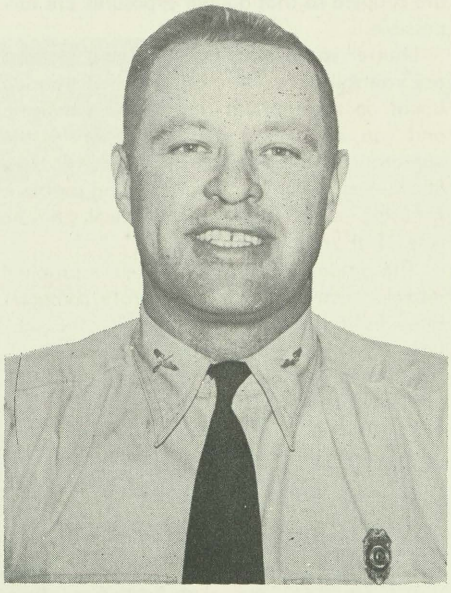
ROBERT W. PHILLIPS

Northeast Region

Born and raised in Providence, Rhode Island, Bob Phillips received his present appointment as a Wildlife Officer for St. Johns County on August 23, 1954. Prior to joining the Game Commission, he served as Deputy Wildlife Officer for a year without pay.

A navy veteran of World War II and the Korean Conflict, Bob "discovered" Florida while in service and returned immediately after discharge.

Bob is an accomplished taxidermist and a musician. He is married to the former Shirley Jane Armstrong. The couple and their two children, Robin, age 3, and Jay, age 1, live in St. Augustine.

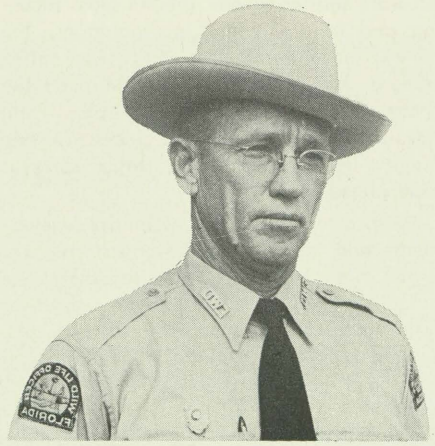


FORREST W. NEUJAHR

Northeast Region

Flying Wildlife Officer Forrest Neujahr was employed as a pilot for the Northeast Region on May 1, 1955. A veteran of World War II, Forrest served as a pilot with the U.S. Marine Corps from 1938 to 1949 and saw service in the South Pacific and Caribbean.

Born in Alvarado, Minnesota, he has had special training in meteorology, public relations and photography. Prior to joining the Game and Fresh Water Fish Commission, Forrest was a pilot for the U.S. Fish and Wildlife Service in Alaska. He and his wife, Katherine, now make their home at Lake City.



RALPH JEFFERSON JOHNS

South Florida Region

Employed by the Game Commission in May, 1949, Ralph Johns was recently appointed Area Supervisor for the Hardee County section of the South Florida Region.

A long time conservationist, Ralph served seven years as a Wildlife Officer and acted as Hunt Director for the Avon Park Wildlife Management Area.

Prior to joining the Game Commission, Ralph worked as a range rider and was employed by the State Livestock Sanitary Board. He and his wife, the former Myrtle R. Bell, live in Wauchula where they were both born and raised. They have two daughters, Demva Johns Harnage, age 20, and Margie Lou, age 16.

FLORIDA WILDLIFE FIELD TESTS AND TELLS

FWFT&T feels that there is never any true economy or combined pride of ownership to be had from the purchase of a cheaply-made imitation of a brand name, quality-made product, but also recognizes that the rule finds exception where a truly quality product is manufactured to recognized high standards of assembly and performance, but is priced to sell at a substantial saving to the consumer. Then an item becomes a true bargain to a careful buyer.

In the camera category, consistently good pictures are entirely possible with simple, inexpensive cameras. However, in such influencing features as versatility, fast and accurate shutter speeds, ground glass focusing and other camera incorporations, the more expensive 35-mm. and twin reflex cameras have long excelled and been the choice of professional photographers and advanced amateurs. Until recently, fine quality 35-mm. and twin reflex cameras were pretty expensive.

Now, competition, and technical developments and labor market changes, that resulted from World War II, together have brought a number of fine 35-mm. and twin reflex cameras into popular price brackets. Some of the German-made imports still carry high price tags, but the day is past when the only good 35-mm. and twin reflex cameras are the top-priced models.

Creating something of a sensation in the twin reflex camera category is the new Yashica-Mat, a quality-made Japanese ground-glass focusing reflex camera that, for $75.50, is challenging long established rival makes for incorporated quality and performance. Comparison of features and list prices show that the Yashica-Mat is the lowest priced of the crop of finer crank-film transport models.

Like its contemporaries, the Yashica-Mat uses standard 120 roll film — black and white or color — and the square 2 ¼ x 2 ¼ negative size offers a comparatively large transparency format where the picture-taker wishes to make color negatives into slides. Loading of film is semi-automatic; after the roll film is properly inserted, the film thereafter automatically stops at picture No. 1 and each numbered sequence.

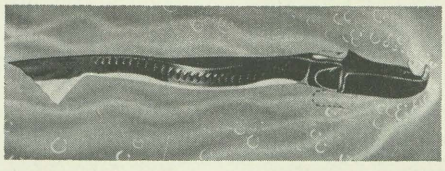
The lenses of the Yashica-Mat are of twin reflex type, four element 75-mm. Lumaxar designation, the taking lens being rated as F3.5 and the viewing lens F3.2— both coated for fast light transmission and desirable picture-taking contrast. In technical quality, polishing and assembly, the lenses are comparable to rival German and American-made lenses costing up to three times as much. FWFT&T assumes that the lenses of the Yashica-Mat are Japanese-made; on the other hand, it is possible that they are German-purchased lenses housed in a Japanese-assembled camera body and mechanism.

The camera's shutter is Copal MX, with 1 second to 1/500 second range, plus delayed action to permit the operator to get into the picture when he wishes. A half-turn counterclockwise of the folding crank handle automatically sets the shutter, and the shutter mechanism and film transport are coupled so that double exposures are impossible.

Shutter speed settings and f-stop settings are controlled by two easily turned knurled knobs on the front of the shutter's housing and can be seen and properly set as the operator looks down on the camera from above—as in normal picture-taking position. Focusing is controlled by a wheel on one side of the camera's body.

The ground glass viewing area is graphed into ½ inch squares for accurate composition. Filling the ground glass with the subject can be accurately done—reducing possible need for "cropping" later, prior to printing or enlarging. A small field lens gives a brighter image on the focusing panel, when light conditions require its use.

FWFT&T does not claim nor imply that the Yashica-Mat is identical in features to the Rollei, the Ikoflex, the Koniflex II, Minolta and other popular, higher-priced twin reflex cameras, but does maintain that, properly used, the Yashica-Mat will produce pictures every bit the equal of its more costly rivals.



WITH warm, summer days at hand, lake waters have warmed up fast, and large-mouth black bass catches are increasing in both number and size.

One of the best Florida black bass baits is an eel, but naturals are hard to come by, which is one reason why black bass fishermen show an interest in every promising artificial eel lure that comes along.

Now, with any bait, some people will catch fish and others won't. As might be expected, the trouble stems from variations in fishing conditions, techniques of casting and the manner the particular lure is presented to a fish and made to perform. For these reasons, some of the lures that FWFT&T has publicly endorsed have been "killers" for some anglers and disappointing "duds" for others. Some of the disappointments have come about by disregarding the manufacturers' instructions packed with the baits.

An artificial black bass lure that is fast proving its worth is the new Min-O-Eel, developed by A. L. Jackson of Eustis, Florida, that combines the best features of minnow, shiner and eel baits into one highly effective lure.

A soft, plastic-flesh body, with built-in weights for proper balance and casting qualities, hides snap-out trap hooks that can be made to work after a fish has seized the bait and started to run with it. These hidden hooks do not open when fish strike but remain in closed position until activated by the angler tightening his line.

A further selective feature of the Min-O-Eel is that the hooks may be set in fixed open position and used that way when a weedness or hookless design is not important.

Convinced that smell and taste are factors in the general appeal a lure has for a fish, the inventors of the Min-O-Eel have impregnated the soft plastic body with a proven taste flavor. At times the Min-O-Eel proves such a gastronomical tidbit to attracted fish that they swallow it completely. In proof, the inventor and cooperating field testers made a movie of Florida black bass striking, and in many cases swallowing, the Min-O-Eel. Tommy Anderson, well-known Florida radio personality and expert on black bass fishing in the Lake County region, vouches for its authenticity. (FWFT&T has seen the film, knows of its origin and vouches for its factual basis, too.)

In considering shape and materials for the first models of the Min-O-Eel, one cut from pork rind was deemed too messy to prepare and store and use. Furthermore, the usual hook arrangement for pork rind eels did not seem perfect; the point of the hook, located at the very front end of the lure,

would miss many strikes. Tail hooks were tried, but these unbalanced bait action, causing foul-ups and weed trouble. Addition of weight to the line, to carry the lure to desired depths, was not liked. Finally, after many experiments the present design and action of the bait were accepted as most satisfactory of all.

As Tommy Anderson, the fishing sage of Eustis, has pointed out, proof that the Min-O-Eel is lifelike to fish is that fish have been caught on the lure by simply using it with a bobber in wave-swept water, as in still-fishing with a shiner, water movement providing the necessary action or "life."

For best results, attach your line directly to the small hole on the lure's tab. Cast and let the Min-O-Eel's natural action take the lure to or near the bottom. Retrieve slowly with gentle or sharp, short jerks. The Min-O-Eel is one bait that definitely should not be rushed on its retrieve.

Troll or drift slowly, activating the bait with short jerks of the rod tip or a variation of a long forward, jerky sweep and rapidly backwards, for diving action. For true eel action, give the lure a very slow, bottom-hopping retrieve punctuated with short jerks, or simply jiggle and shake the rod tip. Try shore casts with very slow, jerky retrieves.

It is very important that the angler release line immediately after a strike, letting the fish run for a full minute or more before setting the hook. This takes will power, but pays off in solid hookings!

FWFT&T does not know the retail price of the Min-O-Eel, but whatever its cost the purchaser will get his money's worth in fish and fun. FWFT&T likes the Min-O-Eel very much.

In tackle stores, or direct from Jackson Products, Mt. Dora.

TEN DAYS IN HELL

(Continued from Page 31)

As they drew close the farmer spoke, but the old man roused himself from his stupor only after the greeting had been repeated, and when he spoke the weight of many years seemed heavy in his voice.

"Am I glad to see you!" he croaked feebly.

"You know me?" the farmer asked in surprise. "I don't remember you."

"Sure!" the old man replied. "I'm Tate—from over by Sumatra! You know me!"

The farmer studied the doddering old man for a long moment, then a smile played across his lips. "I know Tate, all right. Young fellow over to Sumatra. But he ain't mor'n twenty."

"But I tell you I am Tate!" the old man insisted feebly, and something in the tone of his voice and the way he spoke told the farmer he was speaking the truth, though his own mind was forced to shut out the evidence of his eyes.

"I believe you are!" he said excitedly. "But—what's happened to you, man?"

"I've been in Hell!" Tate spluttered. "I've spent ten days in Hell!"

Today no stone marks the location of Tate's grave, but that swamp has immortalized him in a way no headstone ever could.

To our time it still bears the name of Tate's Hell. ●

AROUND THE STATE

Photo by Ralph Voss

Part of a 135-lb. haul of bass, bluegill, and shellcracker seized by Wildlife Officers Doc Dunn (left) and Pete Williams from violators apprehended while seining Lake Shipp in Winter Haven. The seiners' boat and outboard motor were confiscated.

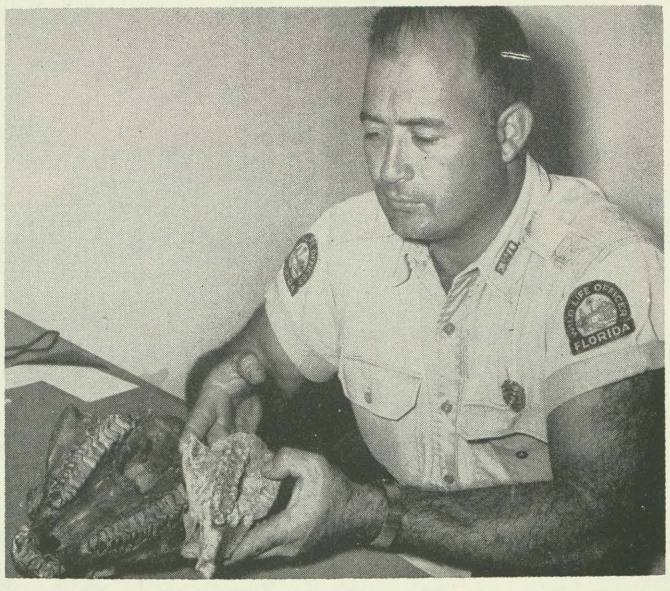


Photo by Jake Johnson

Wildlife Officer Nick Fallier compares a portion of the jawbone of the long extinct Florida tapir with the cast of the skull of one of the animals, now found only in parts of Central and South America and Asia. Florida State University authorities estimate the age of Fallier's find at 2,000 years.

ANIMAL CONNOISSEURS

(Continued from Page 21)

tures, particularly insects, depend upon dew or snow.

Animals, with rare exceptions, are clean in their eating habits. Naturalist Roy Bedichek in *Karankaway Country* wrote: "I think it is not unusual for any land animal capturing muddy prey to wash it if water is handy, much as a dog shakes dirt off his meat. . . . I myself saw a whooping crane take a piece of dirty bread from the edge of a pool of muddy water, walk several feet to a pool of clear water and swing the morsel back and forth therein several times before gulping it down." Raccoons are notable for washing their food before eating.

The skunk has about as bad a reputation as anything that walks. But when it comes to eating this animal is as fastidious as they come. Any obnoxious odor is strictly for the backside. A special delicacy for the skunk is toads. But when a toad gets into trouble it can be as offensive and messy with secretions as anything its size. This is its only protection. So when a skunk catches a toad it has a cleaning job. Usually this is accomplished by rubbing the toad on the grass, leaves, or even the ground, if nothing more suitable is found at hand.

Many animals roam over vast distances seeking their food. Some, like the wolf, may roam over several sections; some over almost half the world, as in the case of migrating birds, and perhaps the whale. Some spend their entire lives virtually without leaving home, so much as traveling a foot; they build snares to bag the travelers—a practice of many insects.

No creatures get their food closer to home than two species of African toads. It has recently been discovered that they are among the world's strangest farmers. They virtually farm their own bodies, making the most of an intensive, non-rotating crop. They grow new skins as frequently as every three or four days. And they eat the skins, which makes up a sizable part of their diet.

The remarkable means the animals use to earn their meals, and to eat them are of endless variety. Perhaps nothing has so influenced the course of the world like the eating habits of animals. ●

DOG CHATTER

(Continued from Page 5)

to teach him the meaning of the word "No." For his instant obedience to this single command is essential not only for your convenience but for his happiness.

It is almost impossible for a puppy trained to respond to the command "No" to form bad habits.

Don't use the command any more than you have to. You mustn't make the poor pup think that the whole world is off limits. And never, never say "No" unless you absolutely mean it and unless you can enforce it. But start early, keep everlastingly at it, and if you never teach him another thing in his whole life, you will still have a fairly well behaved dog.

You will also have a happy dog, because the thing he wants most in life is to please you. Since a dog can't draw fine lines between right and wrong, he needs things labeled clearly. A "No" will provide the label.

But one word of warning, don't change labels on him or it will only serve to mix him up. Don't allow him to jump on you when you have your old clothes on, and then try to teach him not to jump on you when you have on your Sunday best. And don't let him chew your old slipper and forbid him to gnaw on your new shoes. Decide what is to be off limits and use the "No" to put it there and keep it there.

ITHACA, N. Y.—Cornell University is having dogs of various ages shipped in from all over the country to find out whether there are any areas where dogs live longest. This is a part of a continuing program carried on by the University to improve the health and lengthen the life span of dogs. ●

IF YOU FISH SALT WATER—

Salt Water Sportsman

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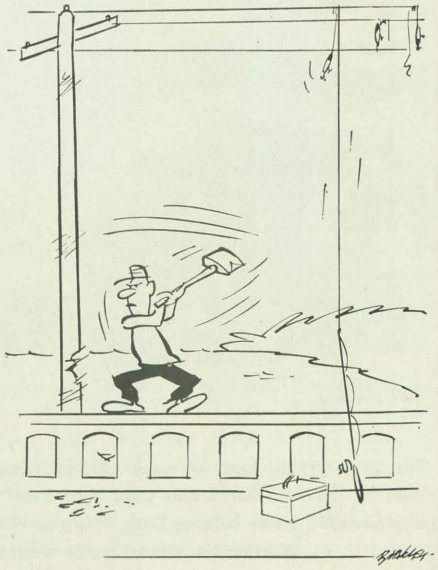
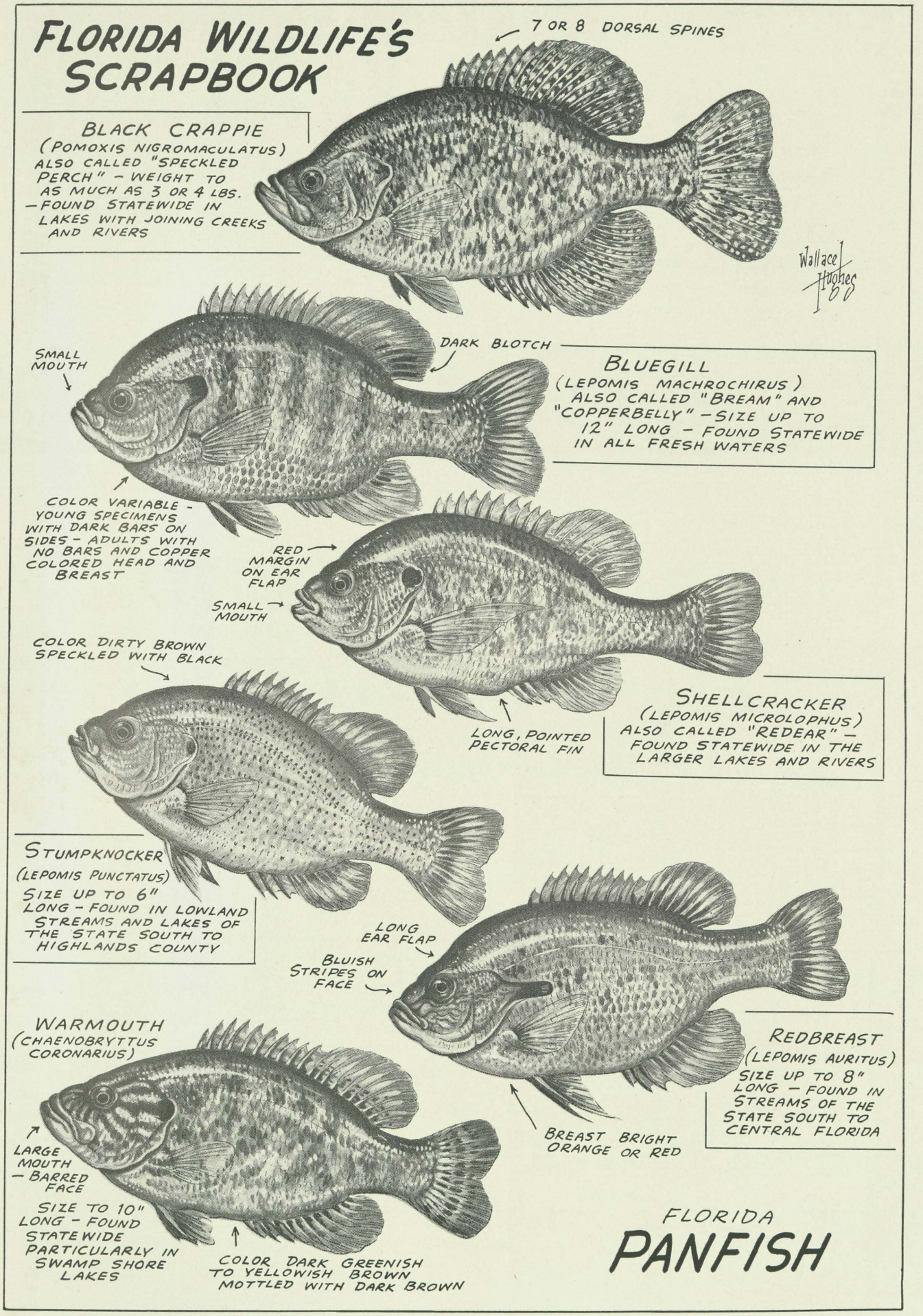


FLORIDA WILDLIFE'S SCRAPBOOK


7 OR 8 DORSAL SPINES
BLACK CRAPPIE
(POMOXIS NIGROMACULATUS)
ALSO CALLED "SPECKLED PERCH" - WEIGHT TO AS MUCH AS 3 OR 4 LBS. - FOUND STATEWIDE IN LAKES WITH JOINING CREEKS AND RIVERS
Wallace Hughes '80
SMALL MOUTH
DARK BLOTCH
BLUEGILL
(LEPOMIS MACHROCHIRUS)
ALSO CALLED "BREAM" AND "COPPERBELLY" - SIZE UP TO 12" LONG - FOUND STATEWIDE IN ALL FRESH WATERS
COLOR VARIABLE - YOUNG SPECIMENS WITH DARK BARS ON SIDES - ADULTS WITH NO BARS AND COPPER COLORED HEAD AND BREAST
RED MARGIN ON EAR FLAP
SMALL MOUTH
COLOR DIRTY BROWN SPECKLED WITH BLACK
LONG, POINTED PECTORAL FIN
SHELLCRACKER
(LEPOMIS MICROLOPHUS)
ALSO CALLED "REDEAR" - FOUND STATEWIDE IN THE LARGER LAKES AND RIVERS
STUMPKNOCKER
(LEPOMIS PUNCTATUS)
SIZE UP TO 6" LONG - FOUND IN LOWLAND STREAMS AND LAKES OF THE STATE SOUTH TO HIGHLANDS COUNTY
LONG EAR FLAP
BLUISH STRIPES ON FACE
REDBREAST
(LEPOMIS AURITUS)
SIZE UP TO 8" LONG - FOUND IN STREAMS OF THE STATE SOUTH TO CENTRAL FLORIDA
BREAST BRIGHT ORANGE OR RED
WARMOUTH
(CHAENOBRYTTUS CORONARIUS)
LARGE MOUTH - BARRED FACE
SIZE TO 10" LONG - FOUND STATEWIDE PARTICULARLY IN SWAMP SHORE LAKES
COLOR DARK GREENISH TO YELLOWISH BROWN MOTTLED WITH DARK BROWN
FLORIDA
PANFISH

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